The Dental Digest.

Vol. I. CHICAGO, JULY, 1895. No. 7.

Original Contributions.

SUGGESTIONS ON DEVELOPING AND CONDUCTING A DENTAL PRACTICE ON BUSINESS PRINCIPLES.

By J. N. Crouse, D. D. S, Chicago.

[Continued from page 325, No. 6, Vol. 1.]

In our last article we discussed at some length compensation and methods of presenting our claims for services, where patients have not already been made familiar with just compensation for good service, and urged that the two must go together.

We have not attempted to say what this compensation shall be or how much each one shall charge, but make this general proposition, viz., that good dental service requires much skill, good judgment, care, energy, and powers of endurance, all of which when concentrated on any line of business are bound to yield more than the average reward. We sometimes suspect that the requirements for a really successful practitioner of dentistry are not very well understood by those entering our ranks. The young man makes efforts here and there, at this and that line of business, but either from the lack of ability or persistent effort does not get the expected success; so he concludes to change, and having no conception of what is required, selects dentistry as an easy occupation and something suited to his taste. Consequently, far too many enter our ranks totally unfitted either by nature or training to fill the requirements necessary for a reasonable degree of success.

They enter some one of the numerous colleges, spend three years of their time and the necessary amount of money, and receive the desired diploma which certifies that they are qualified to practice the profession of dentistry. Armed with the false im-

pression that practicing dentistry is easy and that their college course made them superior to the "old fogy," they start out as additions to the dental profession. On the contrary, unless one entering the profession is possessed of unusual ability, and especially adapted for the service of dentistry, it is not much exaggeration to say that ten years is not too long to make a good practitioner of him. This picture is often more strikingly illustrated when the individual has been obliged to go in debt for the expense of his college course.

We have no means of knowing what becomes of this class of graduates. Fortunately for the community a large number drop out of dentistry, and, it is hoped, find some more suitable occupation in life. While on this subject we will point out another cause for regret in the ranks of the profession. There are many young men entering the profession who have ability, and the first part of their career is brilliant, but from certain causes, some of which we will show later, they do not attain to any degree of success. So, after a short season of prominence in the various lines of dentistry, they begin to fall off gradually, and in a few years more you will see them doing neither themselves nor the community any service. We have watched many such cases and should say the first cause usually is that they lose their determination to make a success of everything they undertake. Just so with a man's education, when he ceases to think and study it grows less, but if the opposite is true he will continually add to his knowledge. It is the same in every operation in dentistry when the determination is lost. First, some part of the service is allowed to slip through without being what it could be made, and as time goes on the number of deficiencies increase until they constitute the majority. Perhaps he may operate for a patient who is not able to pay for good services, so the work is hurriedly done. Then a difficult operation comes to hand which would be far better made with gold, but is made with cement or amalgam because it is going to take a great effort to make it with gold and secure a perfect filling, or, the dentist may have been out late the night before and does not feel very energetic in the morning.

Perhaps by lack of effort in making proper records and collecting his bills, or from some other reason he has allowed himself to get into debt and this disturbance hinders him from giving his

best effort. Being in debt is one of the most frequent hindrances to good service. It is a well-known fact that if a dentist is given credit he will purchase much more generously than when the cash is demanded. This comes from the fact that the money is not usually at hand, for the expenses of a dentist are generally very much out of proportion to his income. Dentists fit up elaborate offices and go in debt for the furnishing of them, thinking that an elegant office will induce the public to come to them. In reality, what brings desirable patients is careful, conscientious service. When a nice office can be had without financial embarassment it will be an aid, but when to have it requires going into debt, do without everything you possibly can so as not to be handicapped at the very start by a debt. What honest dentist can do his best when he knows he is owing pressing bills which should be paid? We write feelingly on this subject, having been through the various stages of financial embarassment, and, until we were out of debt and had a bank account, life was not worth living. We feel sure that those who have had any experience of this kind will pardon the plea we make for good financial management.

It may be that for some reason known only to himself his good spirits and energy are interfered with, and unconsciously he allows the good character of his operations to fall off until the poor ones become a general thing. The fact that good service as well as poor fails in some mouths and needs to be renewed from time to time, and the additional fact that deficient work can leave the operator's hands and the patient not detect that it was deficient until it needs renewing, and the excuse be given that it failed from the same cause that makes good operations fail, makes it possible for a poor operator to impose upon the community with reasonable success for a number of years. This is the most unfortunate part of the difficulty, for if good operations never gave way, making it necessary to renew them, the poor ones would soon be detected, and that class of men who now do poor work would speedily drop out.

Another cause for the failure of the young operator may be that he has been confining himself too closely to his office, and has neither associated with his fellow practitioners in their society work nor read the instructive part of the journals. When these two things are omitted from a man's professional life his growth

is sure to be dwarfed, and he is an extraordinary individual who can attain even average success if he neglects to reap the advantages gained from such helps as dental societies and journals. We know of nothing that could compensate for these with a dentist. Not only should he be a listener and reader, but he should also take an active part in producing as well as absorbing. From an extensive experience we feel able to make this additional proposition, viz., that he will render better service by broadening his life through the active interest he may have along other lines besides dentistry proper, perhaps we should say the details of dental practice. It will enable him to have a wider scope of thought and judgment and to decide what is the proper course to pursue in each particular case, which requires an extraordinary judgment that comes largely from experience and thought. If the dental profession would give some thought to outside matters and take a broader view of life, they would not only serve their patients better by deciding with clearer judgment, but they would also enlarge their minds and make dentistry a much greater profession in thought and ability than it now is.

In order to have patients keep their appointments punctually, it is necessary that the operator always be on hand at the appointed time. It has been our experience that we could accomplish more by not changing patients too often; in other words, by making the sittings longer than is the usual custom. Barring short treatments, two patients in the forenoon and two in the afternoon have been more satisfactory to us and our patrons than shorter sittings. We divide the time in this way: Commence at eight o'clock and continue till ten-thirty; from ten-thirty to twelve-forty-five or one; then a half hour for lunch, and after that it has been our custom to get about five minutes sleep if possible, and this we have found invaluable as a rest. We have two patients in the afternoon between the hours of one-thirty and five-thirty; then a horse-back ride for an hour.

From the time mentioned you will see that we give about nine hours a day to work, and when this time is occupied judiciously, a good deal of service can be rendered and will certainly yield a good revenue if properly managed. We know it is the custom of many men who have large practices to change their patients oftener than here indicated, but in our experience it is much more

fatiguing to take a new patient every hour. We get on well with a plan of operation which takes some thought at the beginning, and each new patient is a renewal as it were of the beginning of the sitting, and some time is lost as well as extra energy exerted which thus makes the day's practice more fatiguing.

In order to get good compensation for one's time in the practice of dentistry, the operator should study and plan how he can accomplish the desired end most rapidly and therefore the most economically to the patient. This brings us to the question of methods and materials, which will be the subject of another paper.

(TO BE CONTINUED.)

THE STUDY OF ANATOMY IN DENTAL COLLEGES.

BY W. T. ECKLEY, M. D., CHICAGO.

Dental Surgery is only one of a number of specialties into which the medical art, in the broadest acceptation of the term, has blossomed; otology, ophthalmology and gynæcology are distinct specialties, each one of which bears the same relation to the parent stem, general medicine, that dental surgery does. The bond of relationship between this parent stem and her various branches, as I take it, is very clearly anatomy. This being the case then the question very naturally arises, shall each student, *regardless of specialty*, study to the same extent the same kind and amount of anatomy? In other words, shall we expect of the dental student as much dissection as we expect of the student of medicine? This to me is a vexatious question and I simply give herewith my views, hoping to elicit thereby the opinions of other teachers of anatomy on this point. Under the present custom we *expect* as much anatomy of dental students as is legally expected of medical students in medical colleges—the whole body, no more, no less. The dental term is three, the medical term four years. The freshman *attends* his lectures—medical and dental—and *makes* one dissection. The second year he *makes* a dissection and *attends* his anatomical lectures—and finishes anatomy. The final result of which is that all our dental colleges turn out fairly good anatomists. But the question comes up here, are we

as faculties satisfied with *fairly good* when the *grade extraordinarily good* might just as well be attained?

In my opinion we are not teaching as much, nor are we teaching anatomy as thoroughly to-day as the merits of the branch demand, or as the circumstances make possible. The reason for this I claim is simply because we cling to the time-honored custom of permitting our students to get their dissections "off" and of slaughtering their material before they thoroughly understand the *technique* of dissecting Can we reasonably expect a student, medical or dental, who has never seen a body demonstrated, to gain much in his first year by dissecting? Before he is familiar with osteology, he is wrestling with all the intricacies of relations, insertions, anastomoses and cerebral topography. Need we smile then when the freshman talks of the Fl. Longus Digitalis?

The ordinary student has the most extraordinary ideas of anatomy. He seldom can draw the line between macroscopic and microscopic anatomical structures. How often will he talk of greater trochanter and haversian canal in the same breath—or express disgust if he fails to find Henle's loops in his first dissection! He comes to us full of the belief that *dissecting* means *cutting*, and acting on this erroneous idea he mutilates, destroys, cuts—does not dissect. The ordinary student is anxious to get down to the bone and cut through the periosteum, or open the thoracic walls and see the valves of the heart! In fine, the student of to-day, after his first dissection, knows about as much anatomy as you and I did. He is satisfied. Are we? But the student is not to blame. The fault is our own—a fault of the times—a faulty method, but one easily rectified.

The following plan has given me satisfaction: First.—I try to make my pupils understand this one thing—that on the cadaver we study macroscopic not microscopic anatomy; hence in their anatomical reading they are to refer everything of a microscopic nature to the chair of histology.

Second.—I assign lessons and have the students prepare the lessons by reading up and examining dissected parts prepared by myself, and kept in our anatomical working museum for their use.

Third.—I always illustrate every lecture by a dissection, and try not to refer to anything in a lecture which I cannot show the class.

Fourth.—I firmly believe no student should be permitted to begin a dissection before he has seen a whole body demonstrated, and himself spent his first year studying the dissected specimens in the working museum of anatomy.

Fifth.—In his second year he should make his two dissections, and study in the museum special dissections of the head and neck.

The above plan I have carried out to my entire satisfaction in some cases, and I intend to make increased efforts in this direction, which seems to me as near the ideal way of teaching anatomy as our limited time now will permit. Of course, this method has its disadvantages. The preparation of specimens is tedious, but once prepared, they are good for years. My experience is that anatomy is not an insuperable branch if studied from nature, but if studied from cut and book alone our students will be only theoretical anatomists at best, and practically as ignorant of the real beauties of the human body as is the theoretical botanist of our flora. I certainly believe if the above plan, improved upon, be carried out, we can expect as much general anatomy from the dental student as we now expect of the medical student, and by a judicious use of carefully dissected specimens of head and neck, I think the modern dental student should be extraordinarily posted on the dental anatomical area. I think this topic should be thoroughly discussed in the National Association of Dental Faculties, and a uniform standard for teaching anatomy in dental colleges adopted. The present method certainly is a farce because students get through too often under false pretences.

A BIT OF PERSONAL EXPERIENCE.

By C. W. Stainton, D. D. S., Buffalo, N. Y.

In the summer of 1857, while quite a young lad, I was hit in the mouth by a stone, breaking the left superior and inferior laterals. Both were broken so that the pulp cavity was exposed. I remember very vividly the painful condition for a few days, especially when I tried to eat or drink. My parents, who had never understood the care of their own teeth, let me suffer, not knowing any better. I know now what every dentist knows, that

in a few days both pulps died. The lower one naturally developed an abscess in a year or two, and then I had my first experience in a dentist's chair, one summer evening when my father took me to the village and I had the root extracted. While a dental student in 1865, the upper root, which had not annoyed me at all, was opened up, treated for a time, then filled and the crown restored with gold. It was the first time that my preceptor had done any work of that kind and we naturally thought very highly of it.

Now comes the interesting point in connection with this case. For twenty years from the time it was filled, about once every four years I would have a few days of inflammation in the tooth, or rather in the membrane surrounding it, culminating in an alveolar abscess. From February, 1886, until February, 1895, there has been no trouble. My last experience, February last, was the most unpleasant of all, the feverish condition sending me to bed for a couple of days.

I have no faith in any treatment, as the root is a mere shell, filled with gold to as near the apex as it could be carried. There has probably been considerable absorption of the point of the root, and I am confident that an attempt to remove the filling and retreat would break up the whole thing. If the case troubled me often, I would not endure it. But the occasional unpleasantness once in four years, or better still, once in nine, seems to me to be the less of two evils—the one I endure, or some artificial denture.

ANIMALS AND STERILIZED AIR.—As far as can be gathered from some recent publications by Dr. J. Kijanozin, of the University of Kieff, the inhalation of sterilized air decreases in a remarkable manner the assimilation of nitrogenous matter. This author kept animals in specially devised apparatus and supplied them with air in an absolutely sterilized condition, and at the same time fed them with food as far as possible free from bacteria. The animals under these conditions lost weight more quickly than normally and excreted more nitrogen and carbon dioxide. The reason suggested for this difference is that the micro-organisms when present aid in the decomposition and peptonizing of the nitrogenous matter in the intestines. In a large number of the cases the animals died a few minutes, hours or days after the experiment, from a cause which, so far, Dr. Kijanozin has been unable to ascertain.

THE LOWER THIRD OF THE FACE—ITS REVELATION OF CHARACTER.

By B. J. Cigrand, B. S., D. D. S., Chicago.

(Read before the Chicago Dental Club at the June meeting.)

Ever since I have been old enough to observe, it has been my very great delight to study the various symbols of character which are so clearly stamped upon the human figure; it was partially due to this desire for knowledge of the human race that I resolved to register myself in the dental profession. For years prior to my affiliation with the dental fraternity, I had been a close student of physiognomy and kindred sciences which reveal the varied characteristics of man. Aside from dentistry, few subjects afford me more pleasure than the history of the advancement and character of the human family, and I must confess that the profession in which I am engaged well affords an opportunity for inquiry into the general dispositions of the people; for it is in the practice of our profession that we come in direct contact with all classes, conditions and races of humanity. And permit me to acknowledge in the beginning of this paper, that no small quota of my success in dentistry is due to a fractional understanding of human nature; and I am impelled to say that it matters little how learned or proficient one may be in the general practice of the principles of dental science, for if he be ignorant or regardless of the general character or idiosyncracies of the patients for whom he operates, he most certainly will be a colossal failure as a dentist.

In a recent article Dr. J. N. Crouse makes this very important remark:—"Human nature—that subtle, undefinable, hard to understand something, which reveals itself constantly in various shapes —this human nature must be met, understood and controlled before a man can become a successful operator, in the full sense of the word. Every student with any amount of practice finds all sorts of dispositions and temperaments to deal with; the pleasant and the disagreeable, the good-natured and the cross, the reasonable and the unreasonable, the honest and the dishonest, the generous and the selfish, the appreciative and the unappreciative, the nervous people out of health, the hysterical subjects, the old maids and bachelors who are seldom well pleased, and the capricious, self-willed and ungoverned children—all of these must

be met and dealt with under the most trying circumstances." He then says: "A distinguished educator has said that 'all education can be summed up as knowing yourself, knowing your fellow-man and knowing how to adapt yourself to your fellow-man.' A dentist should be a good judge of human nature and be able to control his various patients with their different peculiarities, and this requires more than an average intelligence. Much, however, can be acquired by practice and study of the subject. This important faculty is so closely related to the various qualifications of a dentist that its advantages can readily be seen."

Other great lights in the dental profession have emphasized this truth, prominently among them are Drs. Kingsley, Allport, Harris, Talbot and Richardson. I might mention scores of others equally eminent, but I well know that there is not present here to-night a practitioner who does not fully realize the importance of a practical knowledge of racial natures.

In the practice of dental prosthesis and oral surgery the modern dentist must be in the full sense of the word a "facial sculptor," for to his tender care and consideration is left the moulding of many a scowl or smile. He must appreciate the lines of beauty in expression and discern at a glance the changes necessary in the different physiognomies to make them charming and inviting, rather than repellant and false. It is in the practice of our chosen profession that the study of the face is most essential, especially so since "restoration" is its distinctive feature; but he needs a fair understanding of the principles of human character, aside from the purpose of restoring, for, if he wishes to attain an agreeable result in any operation, he must also know for whom he is working.

The face is divine territory and should receive the sincerest consideration of all conscientious practitioners. The face is in truth the window to the brain, the avenue to the mind and the symbol of the character; it is the servant of the emotions; it mirrors the feelings, and gives expression to the impulses. The face is the visible record; the map of the heart proclaiming the character of the individual to all who can read. Upon it are reflected the atoms of individuality which make up the career of its owner. It is the herald which advertises the true composition of the man and tells in unmistaking language the traits, peculiarities and characteristics of the person wearing it. These symbols which

we so clearly trace on the face are not occult or secret, but are open and plain, so much so that even a child may know distinctly the heart of its possessor.

The changing expression of the face is universally regarded as giving response to the passing thought or emotion of the mind. Thus, if one be long afflicted by grief or blessed by joy, wearied by trouble or vexed with care, shadowed by melancholy or excited by wit, inspired by faith or led by delusions, inflated by pride or subjected to shame,—the emotions awakened by these different states reveal themselves in the face and become so fixed as to defy concealment. But let one's circumstances be suddenly reversed, let grief be converted into joy, let oppression be turned to liberty, and the lines of care and vexation will fade away and scarcely a trace will remain to tell the tale. In short, the sunshine and the shadow of our lives are correspondingly engraven on the mouldable face. And it is this ever and constant change of the face that demonstrates the two-sidedness of man's being. It proves beyond the shadow of a doubt that all men are subject to development or the reverse; it also clearly shows that all men, and I mean women too, have a two-fold or "dual character;" the one being natural and the other acquired. The "dual character" is emphatically represented in Robert Louis Stevenson's novel, entitled '*Dr. Jeckyll and Mr. Hyde*'. Be the acquired character what it will, the innate or created one is ever the power behind the throne. The Germans have a saying which is true to the test, namely: "What the gods have given you, the winds won't blow away."

But it is the innate or natural disposition of persons that we as dentists must most clearly acquaint ourselves with, since while engaged in our work we operate on nature's being, and any pain or discomfort which we inflict has an immediate response, a response so sudden that it is almost beyond the power of the patient to control. I do not wish to be understood as meaning that a keen knowledge of the acquired disposition is needless, for we must be well versed in both the innate as well the acquired character if we desire to accomplish successfully our operation, and at the same time keep in good humor the acquired character of the patient. A safe rule to follow is this: "Keep on the dexter side of the innate character."

Now having given a few general observations on the certainty

and usefulness of physiognomy, I will endeavor to briefly tell what indices of character are revealed on the lower third of the face, and let me assure you that the deductions which I here present have been evolved from personal observation, guided by the safe rule of comparison. Much of what I know on the subject must of necessity come from reading and research, but the conclusions which I have drawn are uninfluenced by preexisting theories; nor have I projected a theory and then gone forth to find material to prove it true, but I have made it a point to collect all possible notes, observe closely and compare freely, before permitting myself to formulate a theory or conclusion.

Anatomists and physiologists differ widely as to the definition of the face; there are those who include the forehead as a part of the face, and there are others who claim that the face begins at the supercilliary ridges and embraces the eyes, nose, cheeks, mouth and chin. I prefer the former definition which holds that the forehead is inclusive in the face. Dividing the face in three equal parts, we have in the lower third the lips, mouth, chin, greater portion of the cheeks, and the inferior maxilla.

THE LIPS AND MOUTH.

Dr. Oliver W. Holmes says: "All parts of the face doubtless have their fixed relations to each other and to the character of the person to whom the face belongs. But there is one feature, which more than any other facial sign reveals the nature of the individual. This feature is the mouth, and the portion of it referred to is the corner. A circle of half an inch radius, having

its center at the junction of the two lips, will include the chief focus of expression."

The tongue may be silent, but the mouth and lips never cease to speak, they are ever translating to intelligent observers the inner life of the owner.

A long upper lip, as Fig. 1, indicates firmness, and when perfectly straight shows a tendency towards stubbornness. The saying, "he has a stiff upper lip," is very appropriate when it is intended to convey the idea that the person is firm and unyielding. People possessing this kind of a lip never surrender, and meet the assaults of adversity or the attacks of enemies as the rock meets the surging waves. A large number of generals have lips of this character, Geo. Washington being prominent among them. When the lip curves in at the junction of the lips, as in Fig. 2, it is a mark of determination and is usually seen in explorers and invesgators. Such a lip adorned the face of the great Franklin.

A short upper lip, as in Fig. 3, portrays a weak and wavering character. People with this symbol are constantly changing their mind, and have hardly enough stability and fixedness of purpose to gain a livelihood. They are the "I can't" element in the race. Or as the French say, "He's like the weather."

When the upper lip is curved gracefully outward, as Fig. 4, it symbolizes ambition. These persons evince a good degree of self-respect and dignity. You find that they prefer the place of a leader rather than that of a follower; they are seldom overbearing and are usually of a sunny disposition; they delight to be in society and enjoy a happy "social chat." They have an agreeable and fascinating manner and have an acceptable way of saying and doing things. Abraham Lincoln possessed this lip and was true to its significance.

(TO BE CONTINUED.)

A law journal published in Russia gives some interesting data collected at the eighteen Anthropometric Stations in the empire. One of the curious things brought to light is that in Russia each group of criminals has its own particular color of the eye. Thieves and murderers, it seems, possess "chestnut-brown" eyes. Robbers—that is to say, thieves in a large and violent line of business—have slate-colored eyes, and the same is stated of criminals convicted of swindling. The vagabond classes, among whom are probably reckoned the passportless class, have eyes of an azure blue tint. The color most observed among minor criminals and those convicted of slight offenses is "chestnut-brown green."

Digests.

The International Dental Journal for May, 1895.

"Diseases of the Maxillary Sinus," by Harrison Allen, M. D., Philadelphia; read before the Academy of Stomatology, March 22, 1895. These are of five kinds, as follows, in the order of their frequency: First, a secondary pus-formation dependent upon irritation at the root of a tooth. Second, a purulent inflammation seen in the rheumatic subjects and not to be separated from exhibitions of rheumatism seen elsewhere in the economy. Third, extension of empyema of the frontal sinus into the maxillary sinus. Fourth, polypoid degeneration of the mucous lining of the sinus. Fifth, presence of sero-mucus formed under catarrhal excitement.

First.—Pus in the maxillary sinus when arising from irritation at the root of a tooth is the condition which associates this disease with dental practice in a conspicuous manner. It is important to remember that a very slight amount of pus will sooner or later tend to find its way into the nose, so that a purulent discharge in the nostril should immediately lead the observer to examine the teeth, and if any of the molar or bicuspid series be found defective, they should receive prompt attention. Extraction of the offending teeth will cure the purulent discharge in a very short time, provided that no degenerate processes are set up in the mucous membrane or bone. It will sometimes happen that after teeth have been extracted and the pus collection entirely removed, relapses will occur. In such cases there is one of three conditions to study,—irritation of imperfect absorption of the bone about the bottom of the old socket, imperfect healing of the wound created by extraction,or the presence of inspissated masses, the products of inflammation, in the chamber itself.

Second.—The results of dental irritation may be present in persons of a rheumatic diathesis. But inflammation of any kind, whether excited by disease about the root of a tooth or not, may extend rapidly into the sinus. Such cases are more apt to occur in middle life than at any other period, and are probably more common in those with history of alcoholic excess than in the tem-

perate. * * Rheumatic inflammation may occur on both sides of the face.

Third.—Disease of the frontal sinus if neglected is apt to extend into the maxillary sinus. More than once after treatment of the frontal sinus the discharge into the nose continued, and a second operation was performed upon the maxillary sinus with result of demonstrating that empyema had existed in both the chambers. Several cases were seen in consultation where, after treatment of the frontal sinus empyema, the same condition was detected in the maxillary sinus.

Fourth.—The occurrence of a polypoid mass on the wall of the maxillary sinus may occur in the latter stage of any disease affecting this chamber; whether these growths are at any time the exciting causes of collections of pus is uncertain. This condition is perhaps the most inveterate of any to which the maxillary sinus is subject. Fortunately, it is rare.

Fifth.—In the last place we have occasionally present effusion occurring in the maxillary sinus. I have not seen this condition described, and it was unknown to me prior to my custom of using transillumination as an aid to diagnosis of disease in this portion of the body.

No case has come under my notice in which I could prove that inflammation of the maxillary sinus had extended from the nasal chamber. On anatomical grounds such an extension is readily explicable. I acknowledge that the difference between the two cases here detailed and those of inflammation of high grade is only one of degree. In this connection: a middle-aged lady had deafness due to spastic inflammation of the middle ears. There was a large posterior hypertrophy of the inferior turbinated bone on the right side, and ulceration on both sides of the triangular cartilage of the septum. The disease continuing obstinate led me to make a careful inspection of the facial structure by transillumination; to my surprise, the entire right side of the face was much more opaque than the left. Pressure over the maxillary sinus above the gum on the right side yielded a dull pain which had not been complained of. The patient was of full habit and lithæmic. The opacity gradually disappeared by attention to general health and the use of alteratives.

It is probable that the instances in which this effusion occurs

are more numerous than we have supposed, owing to the fact that prominent symptoms are not created by the presence of the fluid. I think it would have been a mistake to have opened the sinus in this case.

Occasionally diseases of obscure character are located in the region of the maxillary sinus which do not readily admit of classification. A case of this character may be here outlined: a gentleman reported suffering from pain in the right side of the face in which I was unable to determine the cause. After a futile study the patient was etherized and the parts thoroughly explored. The sinus was opened in front at a point posterior to the canine fossa. Everything was found to be in a perfectly normal condition. Nevertheless, the patient rapidly recovered. Opening the sinus thus cured a pain which was centred in the region of the face.

Syphilitic disease, of course, may be located in the maxillary sinus as well as in any other part of the economy. All affections of the maxillary sinus appear to be much less frequent in the well-to-do than in the poor class of patients. Judging from my own experience, about eight per cent. of the crania obtained from dissecting-rooms exhibit evidences of inflammation of these parts. Physicians in charge of large dispensaries report that one or two cases of antral disease are generally found at any time on the list of applicants; yet dentists with a large practice inform us that they almost never see diseases of the maxillary sinus.

"Some Disturbances Caused by Diseases of the Teeth," by Edgar F. Stevens, D. M. D.; Medford, Mass.; read before the Harvard Odont. Soc., Boston, Sept. 27, 1894. Few physicians, especially those who studied medicine years ago, think of the teeth in connection with nervous disturbances of the body. That the teeth are the cause of a great many disturbances not only of the parts contiguous to them, but often of parts far removed, is a recognized fact, and it is not surprising when the intimate connection established between the teeth and other parts ot the body by nerves, blood-vessels, and muscular tissue is considered. It is remarkable there is so little disturbance from some conditions. In the extraction of teeth, for instance, the muscular and nerve fibres are broken, and the bony tissue split and slivered, yet, as a

rule, how little attention or medication is needed. Very often patients are seen with high pulse and temperature, and in an extremely nervous condition caused by alveolar abscess. The different phases of neuralgia are common, caused by deposits of salivary calculus, exposure of pulp, calcification of pulp, pressure of gas, pressure of fillings on pulps, extended eruption, spiculæ or nodules of bone which have not been absorbed after extraction, and by many other causes.

A few cases of disturbances caused by dental irritation: A lady about thirty years old had supraorbital neuralgia. The pain would start a day or two before the menstrual flow in a second superior right molar, and shoot to the supraorbital region. It was intense, sharp, gnawing in character, and would generally last until the second day of the flow, when it would gradually pass away. She had been under treatment for neuralgia, but relief was only temporary. On examination the tooth looked all right, no cavities, no discoloration, not tender to touch, but from the nature of the pain which, as I said before, was of a sharp, gnawing character, I concluded that the pulp was calcified. I removed a large coronomesial filling, which was in perfect condition, and cut down to the pulp-chamber without giving much pain, and found the body of pulp entirely calcified, filling the entire chamber, but not attached to its walls. The root-canals were imperfectly filled with calcified tissue a third of their length. Touching the living pulp in the lower part of the canals would send a sharp pain to the supraorbital region. The pulp-tissue was devitalized and removed, the canals filled, and the crown filling replaced. The neuralgia disappeared. * * * A boy, eight years old, while riding on an electric car was struck on the side of the lower jaw by the brake-handle with such force that it knocked him against the door, bruising his shoulder badly. Five days after this occurred his physician brought him to me for examination. I found upon opening his mouth that the second inferior left deciduous molar had been recently removed (it was knocked out by the brake-handle), the first deciduous molar was displaced, the masticating surface presenting to the tongue, the roots projecting through the gum externally. There was also an incomplete fracture of the outer alveolar plate extending from the inferior canine to the sixth year molar; a severe contusion of the left cheek and laceration of the

mucous membrane, with a discharge of pus internally from a lacerated opening in the cheek. The roots of the displaced molar projected into the wound in the cheek, and I extracted it; I also washed out the abscess in the cheek with a solution of carbolic acid, directing the patient to use an antiseptic wash. I saw the boy on the third day after this, and decided to open the abcess on the outside of the cheek, the swelling being half as large as an egg. About a teaspoonful of pus was evacuated. The parts healed nicely, the scar being barely perceptible. No doubt in this case the cause of abscess was infection from the roots of the deciduous molar, which was in a state of chronic abscess, the roots being forced into the cheek when struck by the brake-handle. * * * A lady had been under the physician's care for a number of months for mania. She would have periods of crying, then suddenly jump up and down and yell at the top of her voice. She had lost weight, her digestion was impaired, and she was apparently in consumption. Her teeth being troublesome, her physician requested their removal. Ether was administered, and all her teeth, which were in a terribly broken-down condition, were removed. Inside of two weeks she had recovered her mind, and is now at the end of four months in a good physiological condition.

"On Contour," by Dr. T. J. Huntington, New York; read before the N. Y. Odontological Society, Nov. 20, 1894. While so much is being said about filling-materials, it may be well to review that upon which the efficiency of all filling-material depends,—*i. e.* form or "contour." Whatever the agency which acts upon a tooth to first produce caries, that agency is presumably no less potent after the carious cavity has been filled than it was before. If accumulation of decomposing foods has been the cause, a flat filling of any size affords a better lodgement for such deposits, and the efforts to cleanse the tooth will be less effectual after such a filling than they were when the convex surface of the tooth was presented; especially is this so when, as is usually the case, a V-shaped space is left, the angle being towards the neck of the tooth. To keep such a space cleaned requires more vigilance than anyone is likely to exercise, and the result is sure to be that the filling gives way, at the same time involving the surface of the

approximal tooth. This probably takes place before the first filling shows any signs of failure, and the point of decay comes so near the cervix that to fill the second cavity requires a great deal of cutting away of the convex approximal surface. When the work is done the teeth or fillings, or both, will be in contact from grinding surface to gum, or there will be a V-shaped space, which is worse.

The case would not be so bad, however, if the only evil resulting from flat fillings were to limit the period of their own usefulness. The V-shaped space readily admits all sorts of material, fibrous and otherwise, and holds it. More presses upon it until the gum is forced away from its natural position. Particles of food become lodged under the gum, causing irritation and suppuration. It is not uncommon to see a cavity thus formed extending half way from the neck of a tooth or teeth to the apex of the roots. The alveolus and peridental membrane give way, and if there is any tendency to calcareous deposits, they find their way most readily to this secluded place and then carry on the destructive work. I believe that a great deal of the trouble which comes to the surrounding tissues of the necks and roots of teeth owes its inception to the very process which I have described. What I have said applies to all teeth, but especially to bicuspids and molars, as the former are very difficult to fill correctly and permanently.

A flat filling need not detract from the original width of any tooth, but it usually does, and where there are a number of such fillings and each tooth loses something of its width, in some cases the aggregate loss is as great as if a first molar were extracted from each side. This results: the contracting arch first changes the direction of the crowns of the teeth as well as their normal position. This change disarranges the articulation of the entire set. This disarrangement through contraction, whether it occur by the loss of teeth or from the cutting away incident to frequent renewing of filling, produces an extreme and unnatural wearing of the grinding surface of the molars. The wearing shortens the bite and prevents the free motions of mastication. It also occasions a moving forward of the lower arch, which brings undue wear on the cutting edges of the incisors, and also brings a force upon the bicuspids in mastication which, when they are weakened

by large fillings, they are unable, and were never intended to support.

The first requisite of contour filling is plenty of space in which to work. While there is much difference of opinion as to how much cutting away should be done in the preparation of cavities, the best plan is to pretty freely cut away all frail portions, or portions which, unless cut away, will, when the cavity is filled, bring the line between filling and enamel in contact, when the filling is finished, with the neighboring tooth. The sacrifice of enamel and dentine sometimes seems unnecessary, but more failures come from the lack of free cutting than from the opposite. If there was more cutting away of the lateral margins of approximal cavities at the cervices of teeth, there would be less fault found with the efficiency of filling materials.

The Pacific Coast Dentist for June, 1895.

"Dental Jurisprudence, Compensation," by H. R. Wiley, A. B., San Francisco. The relations between dentist and patient, as to professional services and compensation therefor, are governed by the general principles applicable to all contracts of the same nature. Contracts are either express or implied. "When the agreement is formal and stated, either verbally or in writing," the law terms it an express contract. "When the agreement is matter of inference and deduction," it is termed an implied contract. It has been held that "in an 'implied contract' the law supplies that which, not being stated, must be presumed to have been the agreement intended." Also, "an implied contract is co-ordinate and commensurate with duty, and whenever it is certain that a man ought to do a particular thing, the law supposes him to have promised to do that thing."

The contract between dentist and patient is more often implied than expressed, yet not the less enforceable on that account when its existence has been established. The law assumes that the general practitioner contracts to use in all his operations the ordinary degree of skill, as well as due care, having regard to the nature of each case and the circumstances attending it. Likewise, it is assumed that the patient, in accepting the services of a dentist, contracts to pay therefor a reasonable compensation, the amount of which is to be fixed by the dentist. If the patient re-

fuses to pay the amount charged, as being excessive, and suit be instituted thereon, the jury must determine what is a reasonable compensation for the services rendered, to determine which requires the production of expert testimony.

"Practical Points on the Treatment of Pyorrhea Alveolaris," by Garrett Newkirk, M. D., Chicago; read before the So. Calif. Odont. Society, June 4, 1895. When a case presents for treatment the first step is to put the entire oral cavity in as cleanly a condition as possible, and then insure further the continuance of that condition. This involves, of course, a most thorough examination of each tooth, with its surrounding gum tissue, and the alveolar walls about each root. Very often this thorough examination cannot be made until after two or three sittings and a careful removal of all salivary deposits; not until the clots and fibrinous shreds have disappeared after such cleansing, and irritation of the gums and swelling have subsided so far as dependent on causes other than pyorrhea. Every diseased point must be reached definitely and systematically, and having done this they should all be indicated on a diagram. No one can safely trust his memory to carry all the details of any case where several regions may be involved, and possibly months pass with the patient away. There are few matters in practice wherein memoranda are of more importance than here, so besides the diagram, records should be made of the treatment employed—when varied and for what reason, of changing conditions, successes and failures—not only for present assistance in each case, but for future reference and satisfaction.

One of the first things to be attended to is the cleanliness of the mouth, in general and particular. The patient himself has a large part to perform in the treatment of his own case, and this fact should be impressed upon his mind. After each meal and at bedtime the mouth must be cleansed by brushing the teeth and thoroughly rinsing with a disinfectant fluid. It is best not to use tooth powder, as insoluble particles may gravitate from it and remain about the necks of the teeth, especially those of the lower jaw. If the case is one where there is little or no salivary calculus, the local reaction about the necks of the teeth will be almost surely acid, and the solution prescribed, both as a wash and for

the brush, should be made decidedly alkaline with bi-carbonate of soda.

If there are deep pockets with flabby, loose margins, into which fermentable substances will be sure to intrude, these must be protected from day to day with pledgets of lintine saturated with medicated glycerine, and such protection maintained till healing has taken place from the bottom of the cavities. A good mixture for this purpose is glycerine with tannin, ten grains to one dram, to which are added a few drops of oil of cloves. Where the teeth are accessible the patient can use this mixture locally, drying the parts before applying. The nitrate-of-silver treatment here works admirably sometimes. Lintine, as it comes in rolled sheet form, is superior to cotton for ordinary use, being fibrous, nice to wind upon a broach, and, best of all, thoroughly aseptic. Besides, it is available for cutting into small squares to be used as protective pads, for wiping instruments, absorbing surplus medicaments, etc.

If the disease has been of long standing it will have extended quite beyond the peridental membrane into and through the cancellated tissue of the alveolar process, entirely through the labial or lingual walls it may be, or between the roots of the teeth. Extending into these spaces or "pockets" there may very often be found irregular fragments of the remaining bone still attached but carious. Until these are removed with a sharp bur there can be no cure. They are dead tissues, irritative, nests for microbes, which cannot be shut in. Decompose they will, and drainage they will have. A most obstinate case of pyorrhea has yielded at once on the discovery and removal of one of these half-broken down walls between lateral and central incisor roots. Some of the most discouraging cases are those in connection with lower molars, because of the difficulty of thorough scaling, and the gravitation of irritating substances into the pockets, with a corresponding lack of drainage. It is sometimes necessary to remove the worst involved to save the others, and usually with success.

Two important things often neglected are: observance of the occlusion of the involved teeth, which are often somewhat extruded and need the removal of their cusps so that they may not be moved in all directions by every closure of the jaws; and the

support of loose teeth, particularly of the lower incisors, by wiring or banding together with gold. In one case four very loose teeth were kept in place and serviceable for eight years by a series of six bands soldered together, which included the four incisors and two cuspids. Of necessity, a loose tooth will not become firm so long as it is unsupported and all its surrounding forces are favorable to movement only.

I am a believer in the strictly local theory of this affection: that at the start it is an infection, then an ulceration, first of soft tissue, then of spongy bone. I believe it to be a *surgical disease*, to be treated by the latest and best surgical methods, which may be comprehended in brief by the terms surgical cleanliness, special hygiene, disinfection, antisepsis, drainage rest and mechanical support. Just as in other affections of a local nature, general conditions have a bearing: the condition of blood, powers of assimilation, constitutional tendencies, healthfulness or disease of other parts, constitution and temperament, any and all these may exert modifying influences. Favorable or unfavorable, they accelerate or retard our cures. As in the treatment of many other intrinsically local diseases, it is well to take them into account. If there be dyspepsia, with sour eructations from the stomach, or disease of the throat and nose, no harm but only benefit could happen by co-incident remedies for these. But when all is said, the treatment in chief is treatment local within the mouth. To my mind there has never been a theory advanced more non-practical and mischievous than the one set forth within a year past that this disease is at one with gout or rheumatism, and dependent not on local conditions but a specific agent present in the blood.

Discussion. Dr. J. D. Moody.—For years careful observers had associated gout with diseases of the gums, reasoning thus: In the metabolic changes attendant upon gout uric acid was formed. This acid was deposited on the root of the tooth. Each granule became the nucleus for concretions of calculus. These irritating the tissues, pus and death followed. Chemical examination proved the presence of uric acid in this unlooked-for place. But Dr. Black takes up the examination and finds it in all mouths, those with phagadenic pericementitis, and those without. Then it clearly cannot be the cause. Gouty deposits are formed in the

cartilage. There is no cartilage here. If of gouty origin the deposits would be in any part of the tissue, but this disease always begins at the margin of the gum. On examining the minute anatomy of these tissues we find that there are lymph-like cells pouring a secretion into the gingival space. What is this exudate? These cells are specialized and their contents and work must be specific. In a diseased condition of gland or system they pour out a vitiated fluid that is destructive of the neighboring tissues. Or is it that the glands themselves break down, involving the rest of the peridental membrane and alveolus? Dr. Kirk cites a case where the calculus was formed at end of root, swelling and pus followed, and this while the gingival space was intact. Remembering the histology of the parts given it will be seen how such a condition might *appear* to be the case. If this exudate is abnormal it at once becomes the habitat for micro-organisms. If there be a specific organism for this disease you will readily understand its further progress. I believe, however, that their part is a subordinate one. Ordinarily disease in a gland is not local; it is the exhibition of a wider and more remote disturbance. As a result of faulty metabolism here other compounds may be formed—a virulent poison, an irritating deposit. These may be a step in the progress of the disease, but they are not the original cause. Some will say positively that no pyorrhea can exist without serumal calculus being present, but I believe this to be an error, as I am confident I have seen many such cases. I believe that the same secretion may at one time show certain characteristics, and at another time different conditions. If pyorrhea can exist in *one* case without calculus it is most certainly a systemic and not a local disease, and the calculus a result and not a cause. I believe we must come to recognize two phases of this disease—one with, one without calculus; the one constitutional, the other possibly both constitutional and local.

Dr. E. L. Townsend.—From my experience with pyorrhea I believe that neither local nor constitutional treatment will effect a cure; and while it is true that instrumentation will greatly relieve the condition, the results are far from being a cure. In the normal state the teeth are surrounded by bony sockets, the edges of which are firm, dense and like the outer surface of the adjacent bone. When pyorrhea has attacked the teeth this bone at the

gingival margins becomes spongy and porous. As the disease progresses the bone disappears and a pocket is produced. The calculus, commencing at the gingival line, has gradually extended far below the margin of the gum and closely adheres to the root of the tooth. As the calculus advances the peridental membrane is crowded away from the root and ceases to perform its function. Nutrition to this part of the tooth is cut off and to all intents is dead-tooth substance; the disease advances and at last the apex is reached and the tooth becomes really dead, and nature allows it to drop out. You may have pyorrhea on one side of a tooth and healthy tissue on the other You can remove the calculus and make the tooth serviceable, but I do not believe you will ever get a healthy union between the gum tissue and the tooth on the side where the pyorrhea existed. There is no pericementum to revivify. The closing of the pores of the dentine with an obnoxious substance, stopping the circulation in the dental tubuli, there to putrefy and poison the surrounding tissue, to my mind is reason enough why this disease is not easily eradicated. The peridental membrane must nourish the tooth, the circulation is through the dental tubuli; if you close these then the circulation must stop and death ensue. In a tooth this can be partial, and the tooth still maintain its position and perform its functions, but that portion which is dead will remain dead, and the soft tissues that come in contact with the diseased tooth substance do not take on a healthy and canny appearance.

The Ohio Dental Journal for June, 1895.

"Practical Points," by Dr. Wm. H. Steele, Forest City, Iowa; read before the Iowa State Dental Society, May, 1895. *Hint on Repairing Rubber Plates.*—It is often a difficult matter to obtain a perfect cast of broken plates, especially if the plate is a lower one, with a good deal of undercut. Cast such a plate in sections and remove one section at a time. The model can be made in two, three, or even more sections if desired; bearing in mind that they must be cast in such a way as to avoid the under-cut, and allow of easy removal. Suppose you have a lower plate, broken between the central incisors; take two pieces of base plate wax, warm them and place in each section of the plate at the first bicuspid, to form a dam for the plaster to flow against. Now oil

lightly, mix the plaster and pour each section; when the plaster is sufficiently hard remove the wax; bore holes or cut grooves in the end of each plaster section, to serve as guides, varnish and oil them; place the broken parts of the plate together in proper position and pour the middle section of the cast. When set, remove the sections, place together in their relative positions, lock in place with plaster, and proceed as usual with the repair.

To Mend a Broken Cable.—A quick and strong way to repair a broken engine cable is to bend a piece of brass in the shape of a tube of proper size to fit snugly over the broken ends of the cable. Thoroughly clean the broken ends of all grease and dirt; slip them into the tube; put on a little soldering acid; lay a piece of jewelers soft solder along the open joint of the tube; hold the tube over a spirit lamp until the solder melts and flows into it and around the broken cable. Trim off all surplus solder, round off all sharp corners, and if the work has been properly done, this will be the strongest part of the cable.

Retaining Medicines in Cavities.—This is an easy operation in any of the simple cavities, but when applying the arsenical preparations in large approximate cavities, it is often difficult to seal it in properly. If the space between the cavity and the adjoining tooth is not too great, a piece of softened gutta-percha can be fitted into the space so as to close the entire cavity, except a small opening in the crown through which the application can be made and sealed in. If the tooth is too isolated to treat in this manner, a shell crown can be formed of thin sheet gutta-percha, slipped over the tooth, and a hole made through it for introducing the application.

About Engine Burs.—Many members of our profession are in the habit of buying their supplies and instruments in too small quantities, which is a very extravagant way of conducting business. If burs are bought in gross lots, instead of a dozen at a time, a great saving can be effected. When ordering, specify exactly what you want, and after getting a nice stock of burs, take care of them—keep them clean, free from rust, and out of the sunlight. They should be put away in cases so arranged that selections can be made without having to handle over the whole stock. When operating, never lay a bur aside until it is cleaned; for when the blades are rusty the bur is worthless. At the trifling

cost of each, there is no excuse for torturing a patient by using dull burs, and the obtundent has never been discovered that can make excavating painless with a slowly revolving, poorly made, dull bur, under pressure in a flooded cavity. On the other hand, the majority of teeth can be excavated with but little or no pain by using good sharp burs, run at a high speed, handled with a light, intermittent touch, and the cavity being kept absolutely dry.

"Lycoperdon for Alveolar Hemorrhage," by C. Brewster, L. D. S., Montreal; read before the Vermont State Dental Society, March, 1895. It has long been known that lycoperdon was a powerful styptic and anesthetic, but it has not been much used in dentistry. Plugging the alveolar cavity with any of the other known styptics is invariably followed, after the bleeding has been arrested, by much inflammation and severe pain. When, however, lycoperdon is used for plugging the cavity, the very opposite effect is produced, the wound, instead of presenting an angry, irritated appearance, and healing up very slowly, shows every inclination to heal by first intention, and not only that, but it shows a decided tendency to heal more rapidly than under ordinary circumstances. When we meet with persistent hemorrhage, we should first discover if the flowing blood is a blood that will coagulate. If a little be caught in a spoon, and the fibrin is seen to clot in three minutes, the vascular or mechanical cause will disappear of itself. But if the blood will not clot, we can rarely, if ever, fail by plugging the socket with lycoperdon. By removing anything in the way of thickened blood from the alveolar sockets, and opening the cellular tissue integument which invests them, bits of the fungus can be easily pressed in with the finger, a piece of cork, spunk, lead or even cotton placed on the top of it, the jaws closed, and the patient kept quiet, cool and erect, and no alcoholic stimulant given.

I have found the greatest virtue to lie in the lycoperdon bovista. The genus giganteum is the largest and easiest obtained; the bovista is small and scarce. The former is considered a distinct species, but the styptic properties of the bovista are much superior, containing a large proportion of phosphate of soda. It occurred to me to select the bovista, and medicate with carbolic acid and camphor, by which means I have removed certain objec-

tions to it, and made it antiseptic as well as styptic. Analysis of the ash of bovista gigantea:

	Per cent.
Dry substance at 100 C - - -	8.35
Water - - - - - - - -	91.65
Ash - - - - - - - - -	0.571
Ash on dry substance - - -	6.36

Analysis of the ash. Calculated on plans calculated on residue.

	Per cent.	Per cent.
Resolute residue in hydrochloric acid	0.000	....
Alumim - - - - - - -	0.107	15.66
Magnesia - - - - - -	0.000	2.03
Sulphuric acid (H_2 So_4) - - -	0.060	8 7ff
Silica (Sio_2) - - - -	09.03	0.44
Sina (Cro.) mere traces - - -	....	....
Phosphate of soda - - - -	0.381	72.18

It is noticeable that phosphate of soda was once largely used to arrest hemorrhage, and it appears that the styptic properties of the puff-ball are due to the excess of this substance.

Items of Interest for June, 1895.

"Position at the Chair," by Dr. W. S. Elliott, Trenton, N. J. Not less important to the comfort of the patient is that of the operator. While an hour or two of even patient submission on the part of the patient is thus limited, the repeated demands on the operator are taxing in the extreme. Ease of position at the chair is a conservator of nervous energy and promoter of satisfactory purposes. The one unfortunate circumstance which tends to opposite conditions is the fact that the treading of the ordinary standard engine, placed as it usually is at the right, necessitates the partial turning of the body toward the window and away from the patient; also compelling the operator to stand during the several hours of work, which in itself is wearisome and exhausting. No feature of the college curriculum seems to tend toward this phase of education, for in passing among the students at their work in the clinic-room, it is at once evident that they labor under great discomfort and inability. If through necessity foot-power must be used, then the driving wheel should be placed behind the chair, so that the body may not become distorted in the effort to reach the treadle. Tnis forced necessity, of course,

will compel the standing position, unless the treading is relegated to an assistant. * * * The swinging bracket table in front of the patient is not a necessity—though sometimes convenient. In lieu of this a small stationary stand at the operator's front will receive his instruments, etc., and within arm's length at his left should be the cabinet of drawers.

"Amputation of Tooth-Roots," by Dr.W. E. Walker, before the last Mississippi Association. The writer described what he claimed to be an unique case, because, in a mouth where all the teeth were perfectly round externally, no caries having ever appeared in any of the teeth, one root of each of the first four molars had abscessed and necrosed, causing death of the pulp, the abscesses having been chronic for some twenty years when the case came under Dr. Walker's care in the spring of 1892. At that time an angry looking tumor had developed on the gum, exciting the apprehension of the patient, who then applied for relief. Examination showing the posterior root of the lower first molar to be denuded of pericementum and therefore incurably abscessed, it was decided to amputate the diseased root. The tooth was opened through the perfect crown, the putrescent pulp removed from the anterior canals and pulp chamber. The posterior root was then amputated on a line above the gum margin to the point of bifurcation, the other canals properly filled, the pulp chamber being filled with gutta-percha, which was pressed through the opening at the point of amputation, and smoothed off on the under side with a warm instrument. The morsal opening was filled as usual. Nothing was done to the other first molars; the tumor was left to take care of itself, the source of irritation having been removed. Three years later—this present spring—the patient requested that the same operation be performed on the other three first molars, the first proving a perfect success. The tumor had disappeared, the tissues were healthy, the socket had entirely filled up, and the gum fitted in under and around the projecting posterior portion of the crown, so that, except by close examination with an instrument, no one would suspect that the tooth had only the anterior root. The posterior root of the right lower first molar, and the lingual root of both of the upper first molars being in a similarly abscessed and necrosed foul condition,

coated with serumnal calculus, last March they were operated on in the same manner, with promise of retaining three more good teeth for the patient.

"A Suspension Denture;" a clinic by Dr. C. L. Alexander, Charlotte, N. C.; at the Mississippi Dental Association, April 4, 1895. By this method the natural teeth are not devitalized, nor are they subjected to any cutting, beyond that of drilling a hole in the labial surface for the reception of screw-posts, which serve as points of support for the denture. In this case the superior left lateral and right central incisors were to be supplied. A narrow band, or skeleton attachment, was accurately adjusted to the lingual surface of the remaining central and lateral incisors, with arms extending to each of the cuspids. On the band a hollow receptacle was constructed, partially filling the spaces of the teeth to be restored, with holes on the anterior wall to receive the long pins of bridge-work facings. These were secured in place on the attachment by bending the ends of the pins within the receptacle, which was then filled with cement, protected at the open end from the fluids of the mouth by amalgam. Screw-posts having been previously inserted in the lingual surface of each of the cuspids and the central incisor, with corresponding holes in the band of the denture, the piece when finished was slipped over the pins, which retained it in position securely, similar pins in the teeth of the model having served as guide posts during the construction of the piece. By this novel method the natural teeth are neither cut nor banded, no gold appears at the labial surface, and the denture does not depend on cement for its retention.

The Dental Cosmos for June, 1895.

"A Case of Nasal Prosthesis," by Dr. M. W. Hollingsworth, Santa Barbara, Cal. While it may not be considered within the province of dentistry to make and adjust an artificial nose independent of an obturator, it is nevertheless quite within the domain of mechanical dentistry to supply a deficiency of this character by the use of such materials and devices as are possessed by the average practitioner. Experience warrants the statement that work of this nature demands no greater skill, artistic or

manipulative ability, than that required in the construction of crowns, bridges, or work of like character in general practice. The case presented was that of an old lady who had been afflicted with a cancerous growth which resulted in the loss—by a surgical operation of the greater portion of her nose, leaving seemingly healthy tissue. However, on account of her age, and the fear of a recurrence of the disease, she was deterred from resorting to plastic operation for restoration. The loss was confined to the cartilaginous portion embraced within lines which might be drawn from the upper termination of the septum articulating with the bony structure, downward on either side of the median line, to a point midway between the lower lateral cartilages and the cartilages of the nose, which were without power of muscular dilation. The greater portion of the septum remained intact.

My first effort was to obtain a complete reproduction or model in plaster, without distortion; and in order to obtain this it was necessary to give reliable inner support to the wings of the nostrils, to counteract pressure from the weight of plaster used to obtain the conformation of external surface. For this purpose well-softened modelling compound was first used and applied upon the end of a pine stick, especially formed and of convenient length. Pressed well up into each air-passage, the compound yielded a fairly accurate impress of the inner walls, but was destined to serve only as a vehicle for the ever reliable plaster-of-Paris, for which room was made by slightly trimming the surface of the compound upon removal. The nostrils being well oiled and otherwise prepared to prevent adhesion, the modelling compound forms, coated with plaster of creamy consistency, were again inserted, the plaster admitting of reaction from possible distortion before hardening. After the impressions were thus obtained, the projecting ends of the pine sticks were removed close to the nose, in order to prevent distortion by leverage. The wings of the nostrils being now supported from within, the external surface was thickly coated with plaster on one side, from cheek to median line, leaving a grooved perpendicular wall. This was shellacked and oiled in order to insure easy separation from a similar coating upon the other side. When well hardened, the lower extremity of the mask thus formed was surfaced, grooved, and otherwise prepared for the lower section, covering the ends of the two upper

sections, as well as the forms in the nostrils, and embracing also a portion of the lip. The three sections were then removed inversely to the order in which they were applied, and again put together and prepared to receive plaster for the cast. The intro-nasal forms were preserved for future use.

After determining the individuality of the natural nose, from photograph and otherwise, I proceeded to build out and form in wax upon the cast a model of the artificial substitute, the manner of attaching which now demanded attention. As external methods were, as far as possible, to be avoided for obvious reasons, preparation was now made for internal support. Here I was confronted with the question of obstruction of air-passages. Naturally, this was to be avoided by properly constructed tubes, for which gold was used, formed in the following manner: Use was made of the intro-nasal forms, as models in which to obtain metallic castings upon which the tubes were to be contoured. In order to prevent irritation, the edges of the upper and lower ends of the tubes were turned inward, thus leaving the terminations slightly rounded. To the upper surface of each tube, on the septum side, were soldered strips of gold extending outward, to act as tangs for attachment. These tangs, bent inward, close up to the septum, formed a bridge over it when soldered together, the manner of obtaining the proper relative positions for which was as follows: The tubes were placed in proper position, and, by aid of a small pair of tongs suitable for the purpose, each was pressed toward the septum, and, while in this position, a small quantity of plaster was placed around the projecting tangs and allowed to harden, when all was removed. This done, the tubes were sufficiently imbedded in sand and plaster to admit of soldering. The ends of the tangs remaining unsoldered were bent over right and left, at a proper distance from the tubes, in order to form an anchor-head required for the vulcanite attachment.

The previously prepared wax model was now applied to the nose and secured to the anchor-head in proper relative position, with the aid of a small quantity of plaster. When safely removed, the familiar process of enflasking was next in order, and, with tubes uppermost, the nose was imbedded to the margins of external surfaces, the tubes and the inner surface of wax remaining exposed for the upper half of the flask. Packed with rubber of

proper or approximate color, the flask was placed in the vulcanizer. But little surfacing was needed in the process of finishing, as flesh tints in oil colors were yet to be applied, and a glossy surface was not desirable. All excess of rubber was removed from inside of the nose close up to the anchor-head of the tubes, thus leaving a light and strong shell. When the two or three coats of paint were applied and thoroughly dried, glossiness was reduced by slightly rubbing the surface with pumice. The upper edge of the nose was held in position by small spring-wire attachment to the spectacles. The work was comparatively simple, successful, and gave perfect satisfaction.

"Two Cases of Infantile Scorbutus," by E. C. Kirk, D. D. S., Phila., Pa.; read before the New York State First District Dental Society, March 12, 1895. A paper recently read before this society calls attention to the deleterious effects upon the teeth of the continued use of the proprietary foods for the feeding of infants. I have been studying for years with especial care a number of cases of complete decalcification of the primary denture in which a common factor has been the habitual use of this class of preparations. I have seen several such cases where decalcification of the six upper front teeth had progressed until nothing but the organic matrix of the tooth remained as a spongy flexible mass, which subsequently succumbed to rapid disintegration. The saliva in these cases was found to be constantly acid. The children were usually highly nervous and irritable, markedly cachetic, and prone to catarrhal inflammatory troubles. I have been able to effect a marked improvement in a few instances, so far as the systemic conditions are concerned, by suggesting a wholesome, nutritious, and varied diet, with out-door exercise and intelligent hygienic care. Where such directions have been faithfully carried out, the second dentition has been most satisfactory, the condition of the oral secretions has become normal, and the carious tendency was but slight. It is important to note that when the oral conditions to which I have alluded prevailed, an inordinate amount of saccharine matter was given, either in the form of candy or sugar, or with the food. The primary denture, with its relatively inferior powers of resistance to chemical action, cannot stand such a diet. There is an im-

portant side to this matter of infant nutrition, which investigation will prove to be a definite outgrowth of the pernicious custom of *depending altogether* upon proprietary and chemical-laboratory food products, viz., the systemic nutritional disorders caused by this custom, because of the inadequacy of such foods to supply all the elements necessary for normal nutrition.

Two closely allied conditions directly due to imperfect nutrition are rickets and scorbutus. I would call attention to the latter, which is certainly caused by the continued use of one class of foods, and is rapidly and permanently cured by the substitution of another class. In this disease alterations take place in the blood, and the amount of potash in both blood and urine is diminished.

About six years ago the late Dr. J. W. White called my attention to a case presenting a remarkable condition of the gums. The patient was an infant girl ten months old, parents well-to-do, and surrounded by every luxury. She had been weaned at two months, and had afterwards been artificially fed with great care. A short time before I saw the case the child had shown symptoms of ill-health, becoming pale, somewhat emaciated, restless and irritable, especially at night, with a tendency to cry out in its sleep, which was more or less broken and fitful. Later, there ensued an almost total motor paralysis of the lower limbs, but apparently no loss of sensation. So far as I could learn there were no pathological manifestations upon the skin, or swellings or ecchymoses. The mouth was in a very bad condition. The incisors of both jaws were fully erupted, and were apparently standing in their alveoli without the least particle of attachment of gum to them. The gingival border had receded from the teeth for at least a line in distance, and presented a thickened necrotic edge, highly vascular, and bleeding at the slightest touch. Over the position of each of the first molars was a vascular tumor, the size of half a cherry. Upon passing a bistoury into these vascular tumors, a considerable flow of dark, apparently disorganized blood took place, and the erupting molar could be felt, and later seen at the bottom of the spongy vascular mass which surrounded it. The bone of the alveolar border surrounding the incisors was denuded so that it could be distinctly seen, and felt with an instrument. The teeth were so loose that it seemed almost certain that they would soon be thrown out of their sockets from loss of

their attachment. The case had been examined by a number of the most experienced physicians of Philadelphia, without having arrived at a satisfactory diagnosis, and the treatment was to combat the several pathological manifestations as they arose. One specialist had diagnosed the case as purpura, another as metallic poisoning. The former diagnosis was found to be erroneous because none of the general symptoms of the disease subsequently developed, while the mouth conditions grew gradually worse.

Acting on the suggestion of metallic poisoning, analyses of the milk, water, and all the food-materials used, were made with negative results. Antiseptic washes were used in connection with stimulating applications in the local treatment of the oral conditions. After all available resources had been exhausted without benefit, Dr. White sent the almost dying child to Atlantic City, changed its diet, and it gradually recovered.

Dr. White tried antiscorbutic treatment, thinking that the disease might be scorbutus, but abandoned it owing to its bad effect on the patient, and because sewer gas was found in the house, which latter fact convinced all concerned that the disorder was of the septic origin. Recent developments have, however, led me to regard the case not as one of septic origin, but as a fairly typical case of infantile scorbutus, more especially as I have recently studied an almost exactly similar case, where there was no possible chance of septic infection, and where the institution of an antiscorbutic treatment resulted in an almost immediate improvement and rapid recovery.

In cases so far observed, in no single instance at the time of the onset of the malady has the child been breast fed. In most cases the infants have been fed upon preserved foods, and have been of the well-to-do class. The disease is on the increase, as there is a growing tendency for mothers not to suckle their infants. After whole milk has been found to be insufficient, a varied diet is needed.

Discussion: Prof. W. P. Northrup. Scurvy is apparently a dietetic disease. It occurs as a malnutrition. The lesion is hemorrhagic. The hemorrhage occurs deep under the periosteum, preferably of the femora, and of the leg next, giving a fusiform swelling to one or both thighs; next in importance is an intramuscular hemorrhage giving rise to painful nodules; hemorrhage

beneath the skin giving rise to the well-known "black eye" and "black and blue" spots; hemorrhages underneath the skin causing pin-points, petechæ, and "flea-bites;" hemorrhages in the mucus membrane which show themselves in the vomited matter and in the discharges from stool. All of the elements of the blood pass through the walls of the vessels in some way, without any demonstrable lesion. The walls apparently are intact. There is no sensation of pain more exquisite than the lifting of the periosteum from œdema. So a child has excruciating pain in its legs during the very first stages of scorbutus. Being usually in the lower limbs, the first symptoms are those of rheumatism of the legs. Often in a case of rheumatism of the legs, when the gums are examined, a verification of the presumable diagnosis is found. Scurvy usually occurs between the ages of nine and sixteen months. The cure is good air, good milk, and fruit-juice of any kind. *If the nurse tells you the baby has rheumatism of the legs, and you find spongy gums—that is scurvy.* This lesion of the gums is merely a hemorrhagic gingivitis, an excessive vascularity of the vessels, with a tendency to interstitial hemorrhage. The lesion is primarily a dilatation of the fine vessels.

Dr. Floyd M. Crandall. The majority of the cases are found in the better class, and scurvy is not a disease of large cities and tenement houses, nor do unhygienic conditions form an important feature in its production. A tenement house child eats about what his parents eat; he is subject to diarrhea, marasmus, and rickets, but is free from scurvy, for he gets some fresh food; while the well-to-do child is so well cared for, and his diet is so strictly regular, that if it lacks the fresh element he is liable to scurvy. The lack of fresh food and the prolonged and exclusive use of proprietary foods and condensed milk will cause scurvy in *any* child, regardless of surroundings, constitution, or previous condition of health. Fresh cow's milk, beef-juice, and orange-juice are the only remedies needed.

Dr. M. L. Rhein. The change of regimen alone will hardly bring about a complete restoration to health, for we find, in treating this form of pyorrhea, that while the change may produce a considerable restoration to health, the local symptoms, if not treated locally, will remain, because of the peculiar situation that they are in. That is to say, they are in the mouth, filled with

bacteria, where, unless local antiseptic treatment is applied, the simple constitutional treatment will be unable to bring about a complete restoration to oral health.

"The Scientific Spirit and the Ethics of Dental Practice," by Dr. C. J. Essig, Phila., Pa.; read before the Academy of Stomatology, April 23, 1895. It is often asserted that there is no *esprit de corps* among dentists, and the frequent instances of disregard of the code of ethics on the part of individuals, and the unscientific spirit in which many of them view the lesions of the organs which it is their specialty to treat, make a bold contrast between the high aims of the profession as a whole, and the practice of a large number of its members. In our societies, current literature, and colleges, in the free and liberal professional intercourse which has been steadily growing for more than a generation, may be found the most gratifying improvement over the time when the tendency was to conceal every invention, device, or detail of practice. We should not attribute every violation of the strict interpretation of the code of ethics to a want of honor or to greed; much of it is doubtless due to absence of the scientific spirit which should guide the practitioner in the treatment of the dental organs. The remarkable want of concordance in diagnosis and treatment; the absence of *esprit de corps* and indifference to the ethics of questions of judgment between dentists, especially when, as is too often the case, the patient is made a party to controversies growing out of difference in treatment, has undoubtedly been a serious injury to our profession in the estimation of the public. The dental profession cannot hope to gain or to hold the highest respect of the people while its individuals exhibit the ethics of the artisan.

Not long ago a lawyer asked me, "Is there no *esprit de corps* in your profession?" Said he, "A relative of mine whose teeth had just been examined by a dentist of high standing and pronounced in good order, called upon another member of your profession in a neighboring town who claimed to have found a large amount of work to be done, and has so shaken the confidence of my relative that he and some of his family have left their family dentist. Now if this incident merely indicates an honest difference of judgment, then there must be some serious defect in your system

of professional education; but if this difference of opinion is, as I suppose, actuated by a commercial spirit, there should be a penalty made to follow such unprofessional conduct severe enough to make it unprofitable for him to repeat it."

Neither from the prophylactic nor therapeutic standpoint has dental caries been sufficiently studied as a disease. Dentists have been so engrossed in the artistic treatment of the teeth and the development of mechanical appliances that a rational systemic treatment has been almost entirely overlooked. Caries of the teeth may with as much propriety be considered a disease as any lesion affecting the different organs of the body, yet any of these may be controlled or cured by medicinal or hygienic treatment. A properly regulated diet, with systematic physical exercise for the purpose of promoting assimilation to the extent demanded by nature for a normal condition of all the organs of the body, would do much to control and even cure dental caries. Many of our young patients have really no physiological right to have teeth, so perverted are all the nutritive functions of their bodies. Does it not then seem that a more rational treatment would consist in a hygienic system which would so build up the tooth-structure that it would be capable of retaining the mechanical stopping over which we spend so much time, skill, and patience, and that would reduce the chances of a recurrence of caries to a minimum?

The Dental Review for June, 1895.

"What a Dentist Saw in Examining Five Hundred Crania," by M. H. Fletcher, M. D., D. D. S., Cincinnati, O. In the examination of five hundred crania, making one thousand antra, my conclusions were that the teeth were as often, or oftener, made pulpless or otherwise pathologically affected by diseases of the antrum than the reverse. One important feature is that the dental follicles holding the crowns of the superior molar teeth, in normally shaped antra, are usually formed at the expense of that cavity, each follicle being covered with a dome which protrudes into the floor of the antrum, while the tooth is being formed and pushed into the mouth; this dome flattens out and disappears by the time the tooth is completed, excepting in rare cases; and it seems a perfectly natural result, when we remember that the alveolar process is formed only after the eruption of the teeth, its po-

sition and shape being entirely governed by the position and shape of the teeth; there is then, no other place where the crowns can find space enough for their development, but the one mentioned, at the expense of the antrum. The finding of some of these domes in the floor of the antrum, in connection with some bony processes, may account for the description by anatomists, to the effect that the roots of the molar teeth protrude into the floor of this cavity, and are either bare or covered with bone, forming numerous bony tubercules corresponding to the apices of the sockets of the teeth. Other authors taking these as authority have perpetuated this statement until it seems the prevailing opinion that this is the normal condition.

Contrary to general belief, it is the exception rather than the rule when the apices of the roots of the second bicuspid and the buccal roots of the molars are in contact with the floor of the antrum.

An interesting fact noted was the almost total absence of dental lesions of any character in the mouths of Northern Indians and Esquimaux. The cases of abscesses in these tribes show about three per cent., whereas the cases of abscessed teeth in the Mississippi Valley Indians were about thirty per cent. The latter tribes suffered an enormous loss of teeth from tartar, the teeth having been partially and even totally destroyed by phagadenic diseases. These facts are significant because the food of the two classes was so different; the northern tribe living almost entirely upon meats and oils, which are free from grit and need but little mastication, while the tribes living in temperate or torrid zones lived more largely upon vegetable diet, containing more or less grit. The vegetable substances usually need more mastication than meat before they can be swallowed, and, while the chemical difference between animal and vegetable foods may cut some figure, I believe the mechanical feature is the greater cause for difference in structure and loss of teeth.

Considering the lack of surgical and medical attention, and that about twenty-five per cent. of them had abscessed upper molars, these people were remarkably free from antral diseases. Out of two hundred and fifty-two cases of abscessed upper molars, only twelve perforated the antrum. This seems to be a point in favor of claiming that abscessed teeth do not cause

antral trouble as often as most authors claim they do, in comparison with other causes of inflammation of this cavity. My reason for believing that the teeth are affected by diseases of the antrum is, that "In some cases the floor is perforated by the teeth in this situation." (Gray.) About four per cent. of persons have, normally, nothing covering the apices of these teeth but mucous membrane. These normal openings occurred where the floor of the antrum was comparatively flat, and not where there was a conical process, and the cases where the conical process occurred were almost invariably covered with a considerable thickness of bone. These conditions being present, it would seem a natural result, when the mucous membrane of the floor of the antrum becomes broken down for the blood and nerve supply of teeth so perforating the floor, to be interfered with and possibly entirely destroyed, since the apical foramen of the teeth must be exposed to these destructive influences. If accurate statistics could be had, they would indicate ten to one in favor of intranasal disorders being the exciting causes of antral diseases.

"Malpositions and Partial Eruptions of the Third Molar," by Thos. L. Gilmer, M. D., D. D. S., Chicago; read before the Chicago Dental Society. The upper third molar is not so prolific of evil results when misplaced as is the lower, neither is it so often partially erupted. Any of the six anterior teeth are more apt to be out of alignment than the third molars. Probability of misplacement or partial eruption is increased by short jaws and large teeth. The positions of teeth out of alignment do not vary materially in different mouths. For instance, on the upper jaw the most common abnormality is in those in which the third molar is placed on the buccal side of the arch, or toward the cheek. Generally this is not a cause of disturbance; when it is, the tooth should be removed. If the tooth is not much out of place, but is decayed and its rough edges cause irritation, its value and the practicability of restoration must determine treatment. In cases of elongation of the upper third molar, caused by the absence of an antagonist, the gum on the lower jaw may be injured and inflamed by occlusion, or the tooth may be forced backward by a partial occlusion with the second molar, and by the wedging in of food. The space thus gained invites decay,

which will probably occur in the distal surface of the second molar and in the mesial surface of the third molar; the peridental membrane of the third molar becomes irritated and inflamed, so the tooth should be extracted. The upper third molar rarely presents lingually, and serious inflammations seldom accompany its eruption. The lower third molar when misplaced or tardy in eruption is more frequently the cause of serious results; this is attributable to the anatomical difference in the two jaws and to gravitation. Malpositions on the lower jaw are not so productive of disturbances as are tardy and partial eruptions.

Not an uncommon position occupied by the lower third molar, which is often productive of serious conditions, is when the tooth presents with its anterior cusps against either the cervical portion of the distal surface of the second molar, or against the lower third of the distal root of this tooth. This position has been known to cause absorption of the root of the second molar, resulting in serious neuralgic pain. It also affords a deep pocket for the lodgment of food and micro-organisms, which causes injury to the crown of this and the tooth adjoining. The extraction of this tooth is often an exceedingly difficult operation. To facilitate its removal it may be desirable to cut a section from the mesio-occlusal surface, as it is often so lodged below the swell of the coronal portion of the second molar that otherwise it is almost impossible of extraction without injury to the latter tooth. Many lower third molars make trouble by not fully erupting, and the antagonist being sufficiently elongated, the gum is bruised, and this, with the accumulation of septic matter under the operculum causes a bad condition, with intermittent inflammation. If the tooth is of value, cut away the operculum of gum, but never until the inflammation is under control. To control this, thoroughly clean the pocket. If there is much pain, take crystals of muriate cocaine and grind them in ninety-five per cent. solution carbolic acid, and apply under the operculum. If this does not relieve the pain, use hot water externally, and, if necessary, anodynes internally. The operculum is best removed by galvano cautery; the operation is bloodless and no more painful than when other means are employed. Following the removal, use antiseptics until the parts are healed.

The International Dental Journal for June, 1895.

"A Method of Inserting Gold Fillings with the Use of Hand-Burnishers, as Practiced Exclusively for Seventeen Years," by Dr. Henry F. Libby, Boston, Mass.; read before the American Academy of Dental Science, Dec. 5, 1894. The writer says that by this method his patients are benefitted; their sufferings are lessened to at least one-half of the usual pain. When the cavity is prepared the pain ceases, comparatively speaking. Many delicate teeth filled with cement and gutta-percha can be treated successfully; also, many fillings with discolored margins can be restored for better adaptability of gold to their frail enamel walls. Teeth that have been given up as lost are restored to beauty and usefulness. The rapidity of the work is increased at least one-third. You all know the meaning of the distribution of forces, how the molecular structure of a tooth takes it up and passes it along, or if its impact becomes too intense, that it disintegrates the enamel prism. It is understood by you all how sharp concussion acts upon any solid body, and you cannot fail to see that the same force applied slowly will be redisturbed (distributed? Ed. *Digest*) without injury.

"Plastics as a Bar to Bacteria," by Joseph Head, D. D. S., M. D., Philadelphia; read before the Odont. Society of Penna., Jan. 12, 1895. On superficial observation it might be thought that wherever moisture could penetrate so could bacteria; but this does not seem to be the case, as bacteria have not yet been found in normal dental tubules. Before decay can take place some free acid must first decalcify the enamel and the orifice of a tubule. In this enlarged opening the bacteria may enter, when devouring the gelatin it excretes acid, which, dissolving more of the lime salts, allows the germ to penetrate farther in. The ideal filling should be composed of a material that is water-proof, adherent, and a non-conductor of heat. And, moreover, a material that can readily be placed in the cavity without the slightest danger of marring the enamel edges.

Gold, while it can be made to exclude bacteria from its own substance, and from entrance at the edges of the filling, is a good conductor of heat, and can be sufficiently hammered to make a perfect seal in teeth of dense structure only. There is no doubt

that gold can be made water proof; teeth have been partially contoured one day and completed the next, perfect welding having been accomplished after the thinnest film of the moistened gold has been removed. But soft foil fillings that have such a record for preserving teeth have been put in under water with lasting results. Does this filling preserve the teeth by starving out the micro-organisms? This supposition can hardly hold, as soft foil fillings have been removed from cavities in a punky, evil-smelling state by means of the explorer, and the dentine beneath appeared sound and dense.

Tin would seem pervious to moisture, as any old filling can readily be separated into portions that only partially adhere. It has not been proven, one way or the other, whether it admits bacteria; but at least it can be said to preserve tooth structure in a manner very similar to soft foil.

Amalgam in itself is water proof, but leaks at the cavity margins. Reducing the mercury to a minimum will do much, but usually all amalgam fillings show some slight shrinking from the enamel after five or six years time. But even granting that all these fillings have been badly put in, we still find, when the bulging edges have been trimmed, that in spite of a palpable leak in many instances the cavity remained sound. It may be affirmed that metallic rust gets into the tubules and protects them, but this can hardly be accepted as conclusive.

Oxychloride of zinc and oxyphosphate of zinc, although adherent to the tooth walls, are readily penetrable by moisture and bacteria. Cones of these materials were made, having a hollow space within that was absolutely excluded from the outer air. Some of the oxychloride of zinc cones were made from calcined powder, some from the uncalcined; the former became extremely dense. These cones were sterilized in a steam bath by the intermittent process in the following way: First, they were boiled in water two to three hours; then removed from the bath and placed in glass jars, the mouths of which were closed with absorbent cotton, and subjected to steam over the water-bath for an hour. They were then allowed to cool for seven hours in an atmosphere of about 70 degrees F.; again subjected to steam for one hour, and cooled over night. Next morning again heated for about an hour; allowed to cool eight hours. Four hours steam heat, twenty-four

hours to cool; one hour steam heat, allowed to cool, and then placed in a bath that after being first sterilized had been tainted with a decayed tooth. At the end of five days immersion they were taken out and opened. The bouillon had filtered through the substance to the hollows inside. The bouillon found within was swarming with micro-organism. The steam bath did not have the slightest effect on the oxychloride of zinc, but the oxyphosphate, from being very dense, seemed much softened. This might seem to depreciate from the value of that particular experiment, but it would still seem probable, if the micrococci could pass through strong oxychloride, that they could also pass through the oxyphosphate, that is so similar to it in substance. On drying the opened oxyphosphate cones, small, shiny crystals lined the inside, which looked not unlike free phosphoric acid that had not become chemically united with the powder. And yet the cones before boiling were extremely dense.

Gutta-percha, althqugh practically if not absolutely impervious to moisture, invariably leaks at the cavity margins. The experi ments with it were as follows: Three canine teeth were taken and opened from end to end. The surfaces of the canals were thoroughly drilled away. One end of each was filled firmly with gutta-percha. A small pellet of cotton soaked with sterilized broth was then placed in the canal. The remaining openings were then dried and filled with gutta-percha. These were sterilized as follows: Two and a half hours in steam bath, four hours to cool, one hour in boiling water, two hours in steam bath, seven hours to cool,two hours in bath, two hours to cool; then placed in tainted broth for five days. At the end of that time they were taken out, dried and passed rapidly once or twice through a Bunsen flame. The gutta-percha was then removed with a heated instrument, the cotton was taken out by tweezers previously sterilized in the flame, placed on a clean glass slide, and wet with two drops of distilled water. This water was then found to contain large numbers of bacteria.

And yet all these filling-materials save teeth, and save them well. Especially is it the case with cement and gutta-percha, that stop decay when nothing else will. These last preserve the cavity walls, and yet allow the bacteria to enter. This seems a paradox and is difficult to explain. One might say that bacteria need air and food; that cement and gutta-percha shut the germs off from

these necessities, and thus render them dormant. But this does not to my mind reveal why some soft, spongy, malodorous soft-foil fillings have preserved the dentine beneath from further decay.

Ash & Sons' Quarterly Circular for March, 1895.

"Cork-Bandage in Haemorrhage after Tooth-Extraction," by Otto Torger, of Prague. Hot water usually will stop severe haemorrhage, as it induces a more rapid coagulation of the blood than cold or tepid water, and is particularly serviceable with anæmic persons. It is to be applied as hot as the patient can bear it in the mouth, and some permanganate of potash should be added to the water for disinfection of the wound. But this treatment does not always succeed. Especially in extractions in the lower maxilla (molars) there occurs not infrequently after-bleeding, and it is in connection with this that I mention the cork-bandage. It is applicable in all cases where there is a tooth in front and one behind the wound left by the extraction. It is chiefly to replace plugging by means of finger-pressure, and, moreover, possesses solid advantages for the patient. The cork-bandage consists of a piece of cork cut in such a manner that it can be wedged between the two neighboring teeth of the one extracted. The thickness of the cork must project somewhat above the teeth left standing in the mouth. Supposing the twelfth year-old molar on the left side has been extracted, and severe hæmorrhage supervenes. Behind the wound caused by the extraction stands the third lower molar, in front of it the sixth year molar. Having laid the wound bare by syringing the mouth, I take a good cork and cut it to the shape indicated. I then plug the wound with a piece of cotton-wool steeped in ferrum sesquichl., then place upon it a small plug of pure cotton-wool, and press the shaped cork between the neighboring teeth. The cork-bandage must sit so tightly that the patient feels a pain from the pressure. I then request the patient to close the mouth, and afterwards make an examination, to see that the bandage has not been shifted from its position through the closure. The advantages for the patient are as follows: If a simple plug of wool were used, the lower maxilla would have to be fixed against the upper, and for a time the patient would be unable to eat, not to mention the trouble this fixture would cause him. With the cork-bandage, however, the patient can open and

shut his mouth, and is able to eat and drink without the bandage being loosened. Furthermore, nothing can penetrate to the wound, as the bandage covers it for the whole width of the alveolus. As a rule, it suffices to leave the bandage in position for twenty-four hours.

The British Journal of Dental Science for June, 1895.

"Formaline," by Dr. G. Forssman, Tandlakare, Stockholm. Formaline is a solution of formaldehyd (methylaldehyd) CH_2O or H. COH in water. The water absorbs forty per cent. of the gas. It has excellent qualities as a hardening fluid. If a finely dissolved solution be sprayed on walls, wall-paper, and furniture, its disinfecting power extends to a good depth, destroying pathogenic bacteria and their germs. Experiments have been made with one to ten per cent. solutions. A one per cent. solution is fully reliable as regards making wounds and instruments aseptic. Silicious earth absorbs formaldehyd, and little by little gives it off again, so may be used in the surgery and in the instrument cupboard. A strong solution of formaline, thirty per cent., causes pain to the epidermis, the mucous membrane of the mouth, and in deep cavities, so that in the first mentioned, the epidermis hardens and is afterwards thrown off, while in the two latter no inconvenience at all arises. A solution of one per thousand can be used for rinsing the mouth and throat. When treating partially inflamed pulps, a one to five per cent. solution gives a satisfactory result, for besides being an antiseptic, formaline also acts as an astringent. A filling can at once be placed above a cauterized and amputated pulp which has been treated with a thirty per cent. solution, if a piece of carbonized wadding be dipped in the solution and applied to the roots of the pulp. After being treated with such a solution for twenty-four hours the roots of the pulp are found to be gray and hard though elastic. For disinfecting teeth with gangrenous pulps, root canals that have been open for a long time, alveolar abscesses, and periosteal inflammations, the same can be used with great success; in root canals, solutions of twenty to thirty per cent.; in alveoli or abscess cavities, solutions of one to five per cent., according to the quantity it is possible to use. The pain that may possibly arise when injecting it in the alveolus, or when syringing it, is easily alleviated by cocaine.

The Dental Practitioner and Advertiser for April, 1895.

"Aluminum as a Base for Artificial Dentures," by E. R. Johnson, D. D. S., Buffalo, N. Y. Some urge that the metal is soft and very pliable after it is swaged. Improper annealing is the usual cause of soft, pliable plates, the usual method being to coat the metal with sweet oil, then to hold it in the flame of a Bunsen burner until the oil has burned off, when it is immediately plunged into cold water. This softens the metal, but leaves a surface tension which is objectionable at this stage of the manipulation, for it makes a re-annealing necessary before the swaging is finished. This again softens the metal, and as it has already taken on the shape of the intended plate, there is not enough swaging and manipulating to be done to temper it again, while if it is not annealed the metal becomes so rigid that perfect adaptation and the avoiding of wrinkles in the plate are almost impossible. The surface tension is accounted for as follows: Before annealing the metal the crystals are all elongated by the rolling of it into sheets. When the metal is heated for the annealing, the crystals tend to assume their original molecular arrangement, but when the metal is plunged into the cold water the molecules become stretched in taking their normal position, so that the outer surface or the outer layer of the crystals has assumed this surface tension. Another proof that the molecules change positions and shape, can be observed if one will try the metal in a gauge before and after annealing. If it is twenty-four before annealing, it will be found to be twenty five afterwards. If one would avoid this surface tension, he should be more careful about annealing and swaging. After the metal has been coated with oil, and this burned off in the Bunsen flame, it should be allowed to cool down gradually. It will be found that it takes some time to do this sufficiently to permit handling, but if it be carefully attended to it will permit a perfect molecular arrangement, and it will be found that the metal is much softer than when annealed in the old way. It will also have increased in thickness from a twenty-five gauge to a very tight twenty-four.

In swaging the metal the palatal portion should be swaged first. This can most easily be done by banking the die with moulding sand up to the ridge, and simply making a counter die of the palatal portion. Swage from this, and then hammer the

metal over the ridge into place as nearly as possible. It will be found that it works very easily, and that wrinkles are handled with the utmost ease. After it is well beaten to place, a new counter die is run, as in the ordinary way. Finish swaging from this. It will be found that the metal is very materially condensed between the die and the counter die. Another reason why the metal is found too soft, is that the vulcanizing is done at a point that is too high. A temperature of 350° will soften the metal. Where vulcanizing is done at 320°, the inside of the vulcanizer will be at least 340°, and should the vulcanizer run up a few degrees above 320°, as is often the case, the metal will come out soft. The vulcanizing should be done at 300°, for an hour and thirty minutes. In conclusion, let me suggest that the metal be placed so that the former grain shall be transverse, or from heel to heel.

Proceedings of Midwinter Fair Dental Congress.

"How to Induce our Children to Cleanse their Teeth Regularly," by J C. McCoy, D. D. S., Santa Ana, Cal. Among intelligent parents who are alive to the best interests of their children, the question of training them in the care of their teeth is considered not only a very important one, but also a very difficult one to solve Many careful mothers ask me the question: "How can I induce my child to attend properly to his teeth without continual prompting?" The best answer I can give is to tell of a plan I have adopted in my own family of four boys, where I find it more satisfactory than any previous method. The first thing to do is to supply the children with necessary appurtenances with which to do the work. Medium brushes, both in size and stiffness of bristle; pleasantly flavored tooth-powder in a wide-mouthed bottle, so the brush can be dipped into the bottle; and last, but not least, plenty of water, and encourage them to use water freely in cleansing their mouths. Each child should have a place, both safe and convenient, in which to keep his brush, powder, etc.

Children should be taught the use of the brush as soon as all the temporary teeth are erupted, and if the parent is faithful to the trust, at four years of age the child will take the care into his own hands, with necessary encouragement and instructions on the part of the parent.

To induce my boys to clean their teeth regularly, I offer a re-

ward of one cent for each time, and require them to clean them three times a day: first, when face and hands are washed on rising in the morning; second, immediately after the noon meal; and third, just before retiring, urging them to special care and thoroughness at this last cleansing. Thus, if they are faithful, they receive three cents each day, and an additional ten cents at the end of every month, making one dollar for thirty days; but if neglectful they forfeit one cent for each time omitted. The account is balanced at the end of each month.

The best way to keep the account, and at the same time teach the children system, is to tack up in the bathroom, or wherever they clean their teeth, a sheet of paper with thirty lines, (one for each day of the month,) with pencil attached. The child can make a mark in the proper line each time he cleanses his teeth, and at the end of the month the account is easily reckoned. The most pleasant part to the child is pay-day, and this should not be neglected. Balance the books carefully, and pay promptly; and allow them to use the money as they choose. I have not found it difficult to encourage them to spend it for some useful article, or to enjoy it in some innocent pleasure.

My experience in adopting this plan has been most encouraging; and if in this way I can induce them to care for their mouths, so that they may be possessors of that most useful adornment, a fine set of teeth, I shall feel most richly repaid. They are taught that scale, or animalculæ, gather in a mouth and on teeth that are not cleansed; and that the only way to keep the horrid creatures (we call them bugs in the citrus belt) off the teeth is to brush them frequently. Teach the child disgust for uncared-for teeth, and the battle is half-won. Not many mornings ago I was somewhat shocked and very much amused on entering the bathroom, where my four-year-old hopeful was scrubbing his teeth with powder and *hot* water, to hear him exclaim in the most triumphant manner: "Papa, I'm scalding the bugs!"

Transactions of the American Dental Association.

"An Etiological Classification of Pyorrhea Alveolaris," by Dr. M. L. Rhein, New York. The various forms of pericemental inflammation, with their purulent discharges at the gingivæ and the subsequent loss of tissue, have been among the questions most

disputed in discussion for some years. The etiology, pathology and treatment of this disorder will continue to furnish fields for "battles royal" at our meetings until science succeeds in vanquishing this destroyer of the dental organs.

Too much valuable time has been consumed in discussing the various names that have been given to these conditions by different men. For years this disease was known by the name "Riggs' disease," in deference to the man who first called public attention to the feasibility of combating its ravages.

In 1877, at a meeting of this Association, the name of "pyorrhea alveolaris" was first introduced by the late Dr. Rehwinkel. The name was used in France previous to that date. After seventeen years of discussion, notwithstanding the objections of some of our ablest men, this name has secured a firmer foothold than ever. You might as well endeavor to eliminate dyspepsia from the nomenclature of general medicine as attempt to abandon the use of the term pyorrhea alveolaris.

The name expresses clearly the clinical feature of a flow of pus from the alveolus at its gingival border. It has, however, been used indiscriminately by different men for every form of this disease, simple or severe, and has thus led, especially in discussion, to great difficulty in understanding what particular form of pyorrhea might be intended by different men.

Obviate this difficulty, and one source of contention is removed, and we can then devote ourselves to the more important fields of investigation and results, without having our time wasted by continued objections to the various proposed names, the discussion of which has so often resulted in drawing away our attention from the more important features of the subject.

With this object in view, I submit for your consideration the following plan of nomenclature:

Retain the name pyorrhea alveolaris as generally descriptive of any condition where there exists a flow of pus from the gingival border of the alveolus, and classify the different forms. A large number of practitioners still cling to the idea that all forms of this trouble are purely local in their origin, and that a permanent cure can be effected by local means. There is no question that lack of hygienic conditions, with all their attendant unsani-

tary surroundings, are at times the sole cause for very severe purulent discharges from the alveoli. This condition, which is purely local in origin and requires only local treatment, must be sharply divided from those serious cases where malnutrition and poverty of life-endowing corpuscles play so important a role.

Consequently we make two grand divisions:

I. *Pyorrhea Simplex*—embracing all cases of purely local origin and requiring only local treatment.

II. *Pyorrhea Complex*—embracing that larger field of more serious disorders and graver affections. These cases are often spoken of as "true pyorrhea" by some authors, "phagedenic pericementitis" by others, and the very latest addition to our category is "hematogenic calcic pericementitis." All these names have been coined because of the observation of certain peculiar clinical features about the alveoli, ignoring entirely the primary cause in this nutritional disorder.

The plan I have the honor to suggest for your consideration embraces the addition of a modifying word to all forms of pyorrhea alveolaris of the complex variety, this modifying word to be indicative of the etiology of the case in question after a satisfactory diagnosis has been made.

Under *Pyorrhea Complex* we make the following subdivisions:

A. Those due to nutritional disorders, among which may be especially mentioned: 1, gout; 2, diabetes; 3, chronic rheumatism; 4, Bright's disease; 5, scurvy; 6, chlorosis; 7, anemia; 8, leukemia; 9, pregnancy.

B. Those occurring during attacks of acute disease, such as acute infective diseases; among these may be mentioned: 1, typhoid fever; 2, tuberculosis; 3, malaria; 4, acute rheumatism; 5, pleurisy; 6, pericarditis; 7, syphilis.

C. Those that are due to nervous disorders; among these we might specify: 1, cerebral diseases; 2, spinal diseases; 3, neurasthenia; 4, hysteria.

D. Those conditions resultant from the toxic effect of certain drugs, such as: 1, mercury; 2, lead; 3, iodine.

E. Called *Pyorrhea Sequentia*, a condition of diseased pericemental tissue left behind after the primary cause has been cured.

With such a classification as this borne in mind, when a man

speaks of "gouty pyorrhea," or "mercurial pyorrhea," or "tubercular pyorrhea," he is at once understood.

The pathology and treatment can then be discussed in a rational manner without the injection of entirely irrelevant matters.

To Save the Babies.—The French Government, despairing of any hope to increase the birth rate of that country, is now devoting its energies to saving those already born. The new law forbids, under a severe penalty, any one to give infants under one year any form of solid food, unless such be ordered by a written prescription, signed by a legally qualified physician.—*Medical Herald.*

Casting-Sand.—Ordinary casting-sand forms an excellent imbedding material for holding on bands, etc., whilst soldering. It should be mixed with water to about the consistency of thick cream, and applied round the bands, the plate having been previously adjusted on a soldering block. A pointed flame should now play on the sand, at the point furthest from the wax, until the sand is dry; the wax can now be burnt off, borax applied, the whole heated up and soldered. It is important not to melt the wax before the sand is dry, otherwise the parts will get displaced. The sand must also, obviously, be free from fragments of zinc or lead. The advantage of this method over imbedding in sand or pumice and plaster is that of ease and speed.—*The Dental Record.*

Electrified by False Teeth.—An electrical engineer writes to the *British Medical Journal* drawing attention to the fact that when two different metals are used in the fixing of false teeth, or of their plates, a galvanic current is set up in the mouth which may cause pain, nasty taste, and other discomforts. He says that a friend recently asked him if it was possible he could have any electricity in his mouth, for his tongue was constantly in pain, and neither doctor nor dentist could find anything the matter. He wore artificial teeth, and on examining these it was apparent that two different metals were used in fastening them to the plate. The electrical engineer straightway attached wires to these metals, and put a galvanometer in the circuit; then putting the teeth into position in the mouth, and allowing them to become wetted with the saliva, it was found that a considerable current of electricity was passing through the galvanometer. On covering the metals with an insulating varnish all pain and inconvenience disappeared, and the sufferer became "himself again." Everyone is aware of the old trick of putting a shilling on one side of the tongue and a penny on the other, and bringing them together, when a nasty taste is caused, and in some cases a distinct feeling of shock. Evidently when dentists use dissimilar metals in their "arrangements" they play upon us a trick of the same character.

Letters.

A LETTER OF APPROVAL.

CHICAGO, July 18, 1895.

To the Editor of the Dental Digest,

Dear Doctor:—As I have seen one or two letters criticising this reform movement, and think that perhaps you have received others of a like nature, I, as one who has been benefitted, would like to say a few words to the dentists concerning the advantages of this movement. It has long been a query in my mind why all dentists do not join the Dental Protective Association. My own observations have led me to believe that dentists generally have a very limited knowledge of the commercial world, and I attribute their not joining the grandest and noblest of all dental associations to this fact.

From a careful examination of my ledgers I find that I have done about six thousand dollars worth of crown and bridge-work in the last six years. So from a commercial standpoint I have the best reasons for joining the Association, for I paid only ten dollars to become a member, and have already gotten *fourteen hundred dollars* worth of protection from it. If the dentists do not understand how this can be, let them take a license and a contract of the International Tooth Crown Co., and read them carefully. They will then see that the license costs twenty-five dollars a year, and that the contract calls for twenty per cent. of all fees received for crown and bridge-work. So from a business standpoint alone, to say nothing of the advantages of the profession being banded together, anyone can see why I joined the Asssociation.

It affords me great pleasure to say a word in behalf of the Dental Protective Supply Co., and to recommend their goods to all dentists and especially to the members of the Association. It is a stock company and all members can become stockholders, and if they would inquire into the methods and purposes of it, I am sure the most of them would quickly take stock. A stockholder can always have credit to the amount of his stock, and the discount on goods, which members as well as stockholders can have, makes quite an item in a short time. I have saved twice my

membership fee in the last year, simply by buying my materials from the company and getting the discount. This is another advantage of being a member of the Association.

The DENTAL DIGEST is the official organ of the Protective Association, and as such should be supported by every member, to say nothing of its value, giving as it does a digest of all the other journals, and keeping us informed of the great and noble work the Association has done and is doing for us.

Trusting that some may benefit by my experience and testimony, I remain,

Yours sincerely,

J. E. HINKINS.

NEW YORK LETTER.

NEW YORK, July 15, 1895.

To the Editor of the Dental Digest:

MR. EDITOR:—In a few weeks there will be gathered at Asbury Park representatives of three dental bodies, viz., The American Dental Association, the Southern Dental Association, and last but not least, the New Jersey State Dental Society. Added to this convocation of dental practitioners there will be other bodies, viz., the National Congress of Faculties of the various Dental Colleges of the country, also the National Board of Dental Examiners. This gathering claims a representing of the focalized interests of the profession of dentistry. The movement practically commenced with the organization of the American Dental Association in 1860. This body was the child of the sincere and honest thought of our best men, a large number of whom have since passed off this scene of action. The American has had for the most part a career of honor and usefulness. The Southern was doubtless the child of desire, to say the least, on the part of the practitioners of the southern part of our nation. If there might have been a legitimate degree of pride, that certainly has had good cause for qualification. It has proved an able and an honest body.

It is assumed that the generic desire of both these bodies was to create a higher standard of dental education, and for what?

There can be only one answer, that the public should receive a better service. In addition to this associative movement there has come the legislative body which has turned its energies towards a compulsory education. To-day in all the states there are laws upon the statute books that compel all incoming practitioners to give the evidence of that higher attainment in dental knowledge. In the haste and thoughtlessness that occurs more or less in all new activities, our profession is handicapped with more or less injustice. It is the retroactive phase of legislative action. This is conceded by the best intelligence of our calling. No reasonable advocacy can for a moment be brought forward in its favor. No one has ever attempted it. No claim is entitled to recognition which does not concede that the public has the first and fullest attention of the best ability we can give. This public has the undisputed right to call for this best ability from any quarter of the United States where they think it exists, but this supposed best ability has not the right to respond to this call from the public, except under the legislative restrictions that have been placed in the way. That there should not be a *perfect* uniformity of law in *all* states alike there can be no possible reason shown. Physicians and surgeons are allowed to go from state to state and render their services, and they do it frequently. A dental practitioner, in a dilemma in a great physical crisis, calls a physician of repute from a distant city and state to aid him in his distress. Now, why enact laws that deny the right to a dentist of responding to the call of a patient in dental distress? If dental skill sufficient for New York or Massachusetts citizens is acceptable, why should this same standard not apply for all states? Is is not full time that the persons assuming the charge of these important matters accomplish something more practical? We are only echoing the sentiment that is being expressed from all points of the compass.

It is no news that much antagonism has been exhibited in New York City between two factions contemplating an advance upon educational lines, and the result of it is being emphasized by the Board of Regents. They propose to create a new degree, "B. D. S.," "which may be obtained after three years' study in a registered dental school, and the title "D. D. S." after a post graduate course of one year." If antagonism shall mature more definite and hon-

est attention to real education, then there can be formed a hope that the public will be the gainers in better service. The sincerity of men who have italicized their talk in favor of high grade examinations will be watched with much curiosity, for it is a certainty that if it means a real knowledge, secured by these high grade examinations, then the financial products will be reduced.

The New York Institute of Stomatology has made a good showing by their first report, "The History of the Cusps of the Human Molars." "Politics and Log-Rolling" are to have no part in this new presentation of the claims for advancement in all that is needed for higher recognition by public opinion. If this can be gained in a much larger sense it will be productive of a vast amount of good. Certainly a school based upon that aim will increase the respect of the more educated professions. So much has occurred during the last ten years that has made our organized bodies anything but attractive. Nothing can so advance true educational faculties as a *large* liberality towards *all* investigators, ("according to our views or not.") Men who are enough in earnest to investigate are entitled to our honest attention. There has not been enough of this spirit manifested.

If this new movement prospers, it will of necessity change the entire complexion of our organized bodies. The purpose of the new one are so distinctly opposite that there cannot be a harmonious growth in unison. This movement will also make apparent sooner or later the tendency to a definite drawing of the lines for or against the independence of dentistry, as a separate calling from medicine. Anything which will eliminate the littleness and selfishness from the doings of men will hasten the *ultimate*.

Two dentists who had reached the advanced age of ninety have recently gone; Dr. Kimball, ninety-four years old, who had practiced for many years in New York; and Dr. Augustus Brown, uncle to Dr. Parmly Brown; Dr. Salymon Brown, Dr. P. Brown's father. Both these brother practitioners gave a half century to the practice of dentistry in New York.

The *California Journal* has fallen into the new fad of Stomatology. Surely it is in line with a good Digest (ion.) We think chewing-gum will have to come to the aid of some things that are being swallowed. According to a dentist of repute, it is a

marvelous digester. Chewing gum and riding a bicycle are the two most active occupations in vogue.

In the meantime Massachusetts has an addition of one hundred dental practitioners before the examining board, and, to the surprise of all, one of them has surpassed everything, even the examiners, having a knowledge beyond all; yet strange, he has never seen the inside of a dental college. Is this not an argument for knowledge vs. time?

In the face of all these things, there never was a time when *public* offices were so on the increase as to-day in New York. Men are going *direct* to the public. These deviations do strip the dignity away from the real thing to a degree, yet the *real* will find here and there discriminators for better service. There is much wisdom in the instruction given by Dr. Crouse in his articles; "Who is sufficient for these things?"

Cordially, M. A. G.

MISSING UPPER LATERAL INCISORS.—A correspondent, Mr. E. Duval, has forwarded to us a series of models showing an absence of upper lateral incisors. The models, five in number, are taken from the mouths of members of the same family, four brothers and one sister. In the case of four both lateral incisors are absent, while in the fifth one is present. The teeth present are well developed and the individuals in question are all tall, well proportioned and in the enjoyment of good health.—*Jour. Brit. Dent. Ass'n.*

DENTISTS' RELATIONS NOT CONFIDENTIAL.—During the trial of the case of The People vs. S. J. de France for forgery, the defense attempted to raise a question of identity, for which purpose they showed that the teeth of the accused were entirely different from those of the person committing the forgery as alleged. In rebuttal, a dentist of Detroit was cited who testified that subsequent to the date of the forgery he had inserted three false teeth in place of two incisors for De France. The case was carried up on appeal to the Supreme Court of Michigan, on the ground that the trial court had erred in admitting the dentist's testimony, claiming that his knowledge was privileged as between physicians or surgeons and patients. The Supreme Court affirmed the verdict of conviction and held that the terms "dentist" and "physician or surgeon," as the latter are used in the statute covering this point, are not interchangeable and that a dentist's relations with his patient can not be considered confidential as is the case with a physician or surgeon.

The Dental Digest.

PUBLISHED THE

TWENTIETH DAY OF EVERY MONTH.

Editorial.

THE DUTY OF THE DENTAL COLLEGES.

A grave responsibility rests upon the dental colleges in regard to the future improvement of the profession. This has reference chiefly to those entering our ranks from now on, as no great change can be expected in the character of the present membership, owing to the fact that too many are beyond the reach of any help, neither associating with their fellow practitioners nor with the organized societies, nor taking the advantages offered by the journals. Therefore, the chief improvement in the character of the profession must come through the colleges, for the following reasons: First, all those now undertaking the practice of dentistry are required by law in most states to take a college course; second, these students are not required to have had a private tutorship before entering, the college course being now so arranged that it removes this requirement of former years, and thus places all the responsibility of deciding the fitness and character of the incoming practitioner upon the colleges. Formerly, the prospective student consulted a dentist and was made familiar with some of the duties and responsibilities of the practice of dentistry, and so when a student came with the recommendation of a reputable practitioner, it was somewhat of a guarantee that, in a measure at least, he had some of the natural qualifications. While the time spent in the office perhaps did not give him as much knowledge of dentistry as the same amount of time in a college would, it had the advantage of giving him an opportunity, before he paid out his money, of learning whether the practice of dentistry would be congenial and successful or not. It also had the advantage of giving him the preceptor's advice, who, if he

was honest, would counsel him not to study dentistry, provided it was apparent that he was not suited to it. But now any young man, without much education and with no natural qualifications, can enter a dental college. He pays his tuition, spends a valuable part of his life, and perhaps at the end of three years awakes to the fact that he has none of the natural and necessary qualifications, and yet he takes his place in the profession, not much of an addition to it. While we do not in any way mean to underrate the value of an education, we feel that natural qualifications play quite as important a part in the making of a successful dentist. If this picture is drawn at all accurately, is it not necessary that at the next meeting the College Faculty Association should seriously consider and endeavor to remedy this great evil? For they alone have the power to do it.

THE PURPOSE OF THE AMERICAN DENTAL ASSOCIATION.

This being a body composed of delegates from local societies throughout the United States, the object of the meeting would clearly appear to be of an educational nature. The representatives of these local societies should give, in condensed form, some of their important work of the year. If this were brought together, and arranged by the proper sections, the transactions of the American Dental Association would be for dentists the most important document issued from any source. But unfortunately up to this time the annual gatherings have been little more than mass-meetings; the delegates coming together with their credentials, and with little or no idea of reporting the work done by their societies, or of giving anything of importance to the body. Therefore, much of the time is wasted, for, having no other business, the delegates and members spend their time in politics and wire-pulling. If an active child is unoccupied he will surely get into mischief, and it is the same with an individual of a larger growth. The way to divorce the Association from politics, which are complained of by many, is to substitute for this form of amusement some active educational work. We hope and believe from present indications that this will be done at the coming meeting.

A PLEA FOR BETTER BUSINESS MANAGEMENT.

One great fault of the dental profession, and one which should be remedied, is their glaring lack of business qualifications and habits. It is a notorious fact that the dental profession generally are without ready money, and this condition is so prevalent and constant that they become discouraged and are unfitted as business men. Hence, when even small opportunities present themselves, whereby they might improve their financial condition, their lack of funds prevents them from bettering themselves. We believe that dentists as a class earn money enough, if they would curtail their expenses and make them proportionate to their earnings, to change this impecunious state of affairs. In our article this month we have made a plea and pointed out methods of management which, if adopted, would entirely change the standing of the dental profession. No other class of men accumulate so much useless material as do dentists, who buy many things they do not need, which is one cause for their financial embarrassment. This plea on finances is made here, because we believe it is one of the chief reasons why the dental profession has no better standing in the eyes of the people, and because it is a great hindrance to their professional advancement.

THE NATIONAL BOARD OF DENTAL EXAMINERS.

The benefits of this organization have not as yet been fully realized. The members are clothed with great power, and can, if they get well organized, do more to improve the character and standing of the dental profession than all other forces combined. It has seemed to us that this body has not as yet exerted or made use of its full powers. We have stated in another editorial that the dental colleges were the only factors that could have anything to say as to who shall enter the profession, or what the character of applicants shall be; but back of the colleges is the National Board of Dental Examiners, who have the power, and can, if they make use of it, decide what the colleges shall do, or what the standard of a reputable college shall be. Made up as it is of

representatives from the examining boards of each state, this organization should do an immense amount of good. We are aware that their influence for good has already been felt, and that they have done much towards uniformity of equipments. Nevertheless, if each state board will see to it that they have a representative present at the meetings of the National body, the power for good can be made almost unlimited.

Notices.

AMERICAN DENTAL ASSOCIATION.

The thirty-fifth annual session of the American Dental Association will be held at Asbury Park, N. J., commencing Tuesday, Aug. 6, 1895.

GEO. H. CUSHING, Rec. Sec'y.

AMERICAN DENTAL ASSOCIATION.

Convenes at Asbury Park, N. J., Aug. 6, 1895. Dentists who are members of state or local associations and contemplate representing their profession at this meeting, are requested to obtain their credentials to same from their society.

The New Jersey State Dental Society will meet at Asbury Park, August 1.

VIRGINIA STATE DENTAL ASSOCIATION.

The twenty-sixth annual meeting of the Virginia State Dental Association will be held at White Sulphur Springs, West Virginia, Tuesday, Aug. 13, 1895, at 10 o'clock A. M.

The executive committee intend that this shall be the best meeting in the history of the Association. The lessees of the "White," the greatest health resort in the country, have agreed to give us and our guests, families included, a rate of $2.50 per day from Aug. 10-19, inclusive. Those who have attended our meetings do not need to be assured that a hearty welcome will be extended to them; those who have not are invited to come and try us.

J. HALL MOORE, Richmond, Cor. Sec'y.

AMERICAN DENTAL ASSOCIATION.

The 35th annual meeting of the American Dental Association will be held at Asbury Park, N. J., commencing Tuesday, August 6th, 1895, and continuing for four days.

Railroad rates. A rate of *a fare and one-third for the round trip* upon the "certificate plan" has been secured. In order to get this reduction, full fare

must be paid in going to the meeting, a *receipt* being obtained therefor from the ticket agent at the *starting point*. If traveling over more than one line secure a certificate over each line, or have the ticket agent at the starting point name in the receipt the different roads over which the ticket is good. This receipt (certificate) must be countersigned by the Secretary of the Association, and entitles the holder to return for one third fare. Arrangements have been made to have the joint agent of the railroads present at Asbury Park on Wednesday, August 7, and it is desirable that all who intend to attend the meeting shall be in attendance, so that their railroad certificates can be passed upon at that time. No rates have been granted over the lines comprised in the Western Passenger Association. Members living west of Chicago should secure the best rates they can to this point where they enter the territory in which the reduced rate prevails.

J. N. CROUSE.
Chairman of the Executive Committee,
2231 Prairie Ave., Chicago.

HARVARD DENTAL ALUMNI ASSOCIATION.

The twenty-fourth annual banquet of the Harvard Dental Alumni Association was held at the "Thorndike," Boston, on June 24, 1895, with sixty-three members and guests present. Reports of the secretary, treasurer and committee on Harvard Dental School were submitted. The invited guests were C. F Adams, LL. D.; Hon. Sherman Hoar, U. S. Dist. Attorney; M. C. Ayres, Editor *Boston Advertiser*; Rev. A. E. Winship, Editor *Journal of Education*; N. J. Loring, LL. B.; and W. M. Conant, M. D., Instructor Harvard Medical School. Drs. C. H. Abbot and Amos J. Hadley, Corresponding Secretaries from Berlin, Germany, were present.

The guests of the evening were happily introduced by Pres. D. M. Clapp, and each guest responded with an excellent speech in a creditable manner. Hon. Sherman Hoar claimed the right for all the professional schools of Harvard University to vote for overseers, saying "Now, Harvard College controls Harvard University, but Harvard University ought to control Harvard University." Dean Chandler was unable to be present, owing to a long and serious illness, but Prof. Fillebrown outlined the work and progress of the school during the past year, stating that the entrance examinations in 1897 would make either French or Latin obligatory, in addition to the present requirements. Prof. Charles A. Brackett, of Newport, R. I., being unable to be present, sent the following letter in the form of a resolution which was unanimously adopted: "That the association expressed appreciation of the services of Prof. Thomas H. Chandler, Dean of the Dental School, sorrow for his continued illness, and earnest good wishes for his speedy restoration to health."

The following named officers were elected for the ensuing year: President, Dr. James Shepherd; vice-president, Dr. Frank Perrin; secretary, Dr. Waldo E. Boardman; treasurer, Dr. Washburn E. Page; executive committee, Waldo E. Boardman, chairman, William P. Cooke, Patrick W. Moriarty.

WALDO E. BOARDMAN, D. M. D., '86. Secretary.

News Summary.

BACTERIA AND COLD.—According to Pictet, a temperature as low as—415.5 deg. F. fails to destroy any form of bacterium.

PATHOLOGICAL SARCASM.—The princes and potentates of Europe are aptly described as men with all kinds of orders on their breasts and all sorts of disorders in their blood.

HANDKERCHIEFS.—It is supposed that the use of handkerchiefs first became general during the Empire in France. The Empress Josephine had bad teeth, and to hide the defect when talking or laughing always held her handkerchief before her mouth.

COLORING ALUMINIUM.—A method of coloring aluminium has lately been patented by Ida Ouaglio of Berlin. The objects made from aluminium are first covered with zinc and then colored black by a solution of either platinum, copper, nickel or antimony, a varnish being employed to protect the designs. —*Jour. Brit. Dent. Ass'n.*

PERFORATION OF THE PALATE IN A SUCKLING INFANT.—Dr. von Geuser exhibited at a meeting of the Imperio-Royal Medical Society of Vienna, on May 24, an infant of three months suffering from hereditary syphilis with perforation of the palate, although at birth there was no sign of syphilis. Such a condition is extremely rare, and according to Dr. Geuser only two cases are on record in the whole of medical literature.—*Jour. Brit. Dent. Ass'n.*

EXTRACTION OF TEETH.—In his Thesis for the doctorate, Dr. Eugene Guerard discusses the possibility of septic affections in connection with the extraction of teeth. He records a dozen cases in which ordinary extractions have been followed either by serious necrosis of the jaws or by diffuse abscess, phlebitis, and meningo-encephalitis. In one fatal case erysipelas commenced at the wounded gum, and was due to the operator's negligence. There is only one way of avoiding such troubles and that is by regarding tooth-extraction not as a simple operation without danger, but as one which leaves a wound difficult to treat and often accompanied by serious lesions. It should be practiced therefore with all antiseptic precautions possible.—*Brit. Jour. Dent. Sc.*

HUNGER OF THE WORLD.—Mr. E. G. Ravenstein, the eminent English geographer and statistician, has made some calculations to find when the earth will be unable to find nourishment for its population and they will be forced to cannibalism or starvation. According to him when the number exceeds 5,994,000,000, or in round numbers, 6,000,000,000, this emergency will arise, and Mr. Ravenstein believes the population of the globe will reach this figure in 284 years more. He points out that the average decimal increase is 8 per cent, divided as follows: Europe, 8.7 per cent; Asia, 6 per cent; Africa, 10 per cent; Australia and Oceanica, 30 per cent; North America, 22 per cent; South America, 15 per cent.—*Jour. Amer. Med. Ass'n.*

Obituary.

Augustus Woodruff Brown, D. D. S.

Died July 5th at his summer residence, in Manchester, Vt., aged ninety. He was born in Litchfield, Conn., and was the oldest dentist in America at the time of his death. He practiced in New York City for half a century, and retired with a fortune fifteen years ago.

He was at first associated with Dr. Solyman Brown, his oldest brother, whose name is one of the best known in early dental literature. In their office at 13 Park Place, New York City, the first Dental Society in the world was organized and the first Dental Journal planned. These were the American Society of Dental Surgeons, of which Dr. Eleazer Parmly was first president, and the American Journal of Dental Science, of which Dr. Solyman Brown was first editor.

Dr. Augustus W. Brown at one time had the most aristocratic and lucrative practice in New York, and was widely known in social as well as professional circles.

One of the earliest Honorary Degrees of the Baltimore College of Dental Surgery was conferred upon him.

He married Miss Emma Mandeville, who survives him, together with two daughters. He had nine children, but none of his sons grew to manhood.

The funeral services were held at Manchester, and the interment was in the family vault in old Marble Cemetery, New York City.